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The Economist and the State	*E. A. Goldenweiser*	1
The Prospect for Economic Growth	*C. R. Noyes*	13
Expansion and Employment	*E. D. Domar*	34
Determinants of Distribution of Income	*M. A. Copeland*	56
Postscript on War Inflation	*W. J. Fellner*	76
The International Bank	*Nathaniel Weyl and M. J. Wasserman*	92
Price Control under Imperfect Competition	*M. Bronfenbrenner*	107
German Finance in World War II	*R. W. Lindholm*	121
Communications:		
Marginalism and Labor Markets	*R. A. Lester*	135
A Rejoinder	*Fritz Machlup*	148
A Rejoinder	*G. J. Stigler*	154
Effects of Income Redistribution on Consumer's Expenditures	*Harold Lubell*	157
Union Obligations under the National Labor Relations Act	*N. W. Chamberlain*	170
The Anglo-American Financial Agreement	*Alex Rosenson*	178
Notes on the Productivity Conference	*T. J. Mills*	187
Official Criticism of Soviet Economics Institute	*Harry Schwartz*	190
Geometrical Comparison of Elasticities	*A. P. Lerner*	191
Memorial: Gaëtan Pirou		192

Reviews of Books~194 • Titles of New Books~256
Periodicals~269 • Notes~277

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BOOK REVIEWS AND TITLES OF NEW BOOKS

Economic Theory; General Works

Book Reviews:
MERRILL and others, *Fundamentals of Social Science*, by G. P. Adams, Jr. 194
SALIN, *Geschichte der Volkswirtschaftslehre*, by W. Fellner 195
Titles of New Books 256

Economic History

Titles of New Books 256

National Economies

Book Review:
WHITAKER, editor, *Inter-American Affairs, 1945*, by V. Salera 195
Titles of New Books 256

Economic Systems; Post-War Planning

Book Reviews:
GRAY, *The Socialist Tradition, Moses to Lenin*, by M. M. Knight 198
BETTELHEIM, *Les Problèmes Théoriques et Pratiques de la Planification*, by R. Mossé .. 201
LANDY, *Marxism and the Democratic Tradition*, by K. W. Kapp 203
LORWIN, *Time for Planning: a Social-Economic Theory and Program for the Twentieth Century*, by A. P. Lerner 206
Titles of New Books 257

Statistical Methods; Econometrics; Economic Mathematics; Accounting

Titles of New Books 257

National Income and Product; Income Distribution; Consumption Statistics

Titles of New Books 258

Business Cycles and Fluctuations

Book Reviews:
LOEB, *Full Production without War*, by E. D. Domar 208
SHAW, *The Individual and the Postwar Period*, by D. Lion 211
Titles of New Books 258

Public Finance; Fiscal Policy; Taxation

Book Reviews:
RUEFF, *L'Ordre Social*, by R. Triffin 213
ABBOTT, *Management of the Federal Debt*, by H. W. Hargreaves 215
ALTMAN and KEESLING, *Allocation of Income in State Taxation*, by V. J. Wyckoff 217
Titles of New Books 258

Money and Banking; Short-Term Credit

Book Reviews:
PEDERSEN, *Pengeteori og Pengepolitik*, by R. Bean 218
BERNÁCER, *La Doctrina Funcional del Dinero*, by V. Salera 221
Titles of New Books 259

International Trade, Finance and Economic Policy

Book Reviews:
HEXNER, *International Cartels*, by B. W. Lewis 223
WHITTLESEY, *National Interest and International Cartels*, by J. S. Bain 225
ALLEN, *World Monopoly and Peace*, by K. Gordon 226
MANDELBAUM, *The Industrialisation of Backward Areas*, by N. S. Buchanan 230
Titles of New Books 259

Business Finance; Insurance; Investments; Securities Markets

Book Review:

ABBOTT, *Financing Business during the Transition*, by J. A. Estey 232

Titles of New Books 260

Public Control of Business; Public Administration

Book Review:

NELSON, *Arsenal of Democracy: The Story of American War Production*, by V. M. Barnett, Jr. 233

Titles of New Books 260

Industrial Organization; Price and Production Policies; Business Methods

Book Review:

STEINDL, *Small and Big Business, Economic Problems of the Size of Firms*, by J. M. Blair 237

Titles of New Books 261

Marketing; Domestic Trade

Book Review:

MAYNARD and BECKMAN, *Principles of Marketing*, by J. S. Robinson 240

Titles of New Books 261

Mining; Manufacturing; Construction

Titles of New Books 261

Transportation; Communication; Public Utilities

Titles of New Books 262

Agriculture; Forestry; Fisheries

Titles of New Books 262

Economic Geography; Regional Planning; Urban Land; Housing

Book Review:

VANCE, *All These People: The Nation's Human Resources in the South*, by H. L. Hitt .. 242

Titles of New Books 262

Labor and Industrial Relations

Book Reviews:

TELLER, *A Labor Policy for America: A National Labor Code*, by B. Willcox 244

DICKINSON, *Collective Wage Determination: Problems and Principles in Bargaining, Arbitration, and Legislation*, by J. T. Dunlop 250

Titles of New Books 263

Social Insurance; Relief; Pensions; Public Welfare

Titles of New Books 264

Consumption; Coöperation

Titles of New Books 265

Population; Migration; Vital Statistics

Book Review:

THOMPSON, *Population and Peace in the Pacific*, by W. W. Lockwood 252

Titles of New Books 265

Unclassified Items

Titles of New Books 265

Recent Dutch Publications

Titles of New Books 266

Number 48 of a series of photographs of past presidents of the Association.

E. A. Goldenweiser

The American Economic Review

VOLUME XXXVII MARCH, 1947 NUMBER ONE

THE ECONOMIST AND THE STATE[1]

By E. A. GOLDENWEISER

According to Victorian reckoning, this is the Diamond Jubilee of the American Economic Association. In the charter of incorporation of this Association its purposes are stated as follows: "(1) The encouragement of economic research . . . (2) The issue of publications on economic subjects, and (3) The encouragement of perfect freedom of economic discussion. The Association *as such* [italics supplied] will take no partisan attitude, nor will it commit its members to any position on practical economic questions."

Admirable purposes and principles. In pursuing them the Association, over the sixty years of its life, has rendered invaluable service to the profession. It has offered an opportunity for economists to present their ideas to colleagues and to have these ideas discussed at the meetings. It has enabled members through the *Proceedings* and the *Review*, to keep in touch with the work and thinking of fellow-members. It has also—and this perhaps has been its greatest service—offered an opportunity for many members to get together once a year and to become acquainted with each other. It has created a degree of *esprit de corps* among economists.

But it has remained aloof from practical affairs. It has been academic, though in the fine, not the derogatory, sense of the word. In the meantime profound changes have occurred in the life of the country. Not only has the elimination of time and space from travel and communications made all decisions necessarily more urgent and decisive, but the growth of economic units and the concentration of economic power have imparted to a vastly larger proportion of public and private actions a nation-wide, nay, a world-wide significance. The United States can no longer remain complacently aloof behind the oceans, nor the economist behind the book stacks. An economist's study can no longer be his world; the entire world must be his study.

To an ever-growing extent public authorities and national and international business enterprises turn to economists for advice and guid-

[1] Presidential address delivered at the Fifty-Ninth Annual Meeting of the American Economic Association, Atlantic City, January 25, 1947.

ance; and economists in increasing numbers seek partial or total employment outside of academic halls. There are many economists who, like other thinkers, remain aloof and follow their own thoughts in an arduous effort to discover the eternal verities. The world needs these men and the profession is proud of them, for every important practical forward step in the progress of humanity has had its origin in the abstract, supposedly impractical thinking and dreaming of the scholar; the physicist, biologist, philosopher, and student of social problems.

The closet thinker may be compared to the scientist who invents and perfects means of achieving military and industrial objectives; other economists may be likened to the military or industrial army who must utilize the results of the thinking of the scientist in helping to solve the problems of the day. Both phases of the economists' work are necessary to society; the profession has a responsibility for developing both kinds of economists—the thinker and the doer. But while it may be feasible for the thinker not to be a doer, it would be fatal for the doer to refrain from thinking.

It should be recognized that for many, if not for most, economists the quiet and peace of the ivory tower has been lost; the confusion and struggle of the market place is upon them. Many have gone to work there, and have rendered yeoman service to the economy and the state.

But they have done so as individuals, for they have had little, if any, organized support from their colleagues in the Association, little facility for sounding the trends of thought among their fellow workers. Some method should be devised by which the public, and more particularly members of the Association, could find out how the economists of the country stood on important issues. One way to promote this would be to create a small committee on Public Issues. Such a committee could select issues on which the views of members would be sought. It could take responsibility for wording the questions, calling for assistance on persons best qualified to give it. The entire Association, or the portion of it which might be expected to know most about the subject, would then be circularized. After the replies had been received, the Secretary of the Association would issue a statement to the effect that the 4000 members of the American Economic Association have been asked a certain question; of this number—so many replied; of the replies—so many took one view, and so many another. This could be refined by classifying the replies geographically, by field of interest, and in other ways. Such a statement would not commit the Association *as such* to any viewpoint, and therefore would not violate the letter or the spirit of its charter. But it would enable the public to know currently how the profession stood on an issue and would give economists themselves a way of knowing better what other members of their craft were thinking.

An incidental, but not unimportant, advantage of such a procedure would be that it would counteract the effect of pronouncements on controversial questions appearing from time to time, attributed to a stated number of economists. For many reasons such statements are not the best way for economists to voice their views. There is no way of judging whether those who are quoted represent a prevailing or a minority opinion. The questions on which the views are expressed are not selected by a representative group—but are usually propounded by an energetic individual who wants to gather support for his position. Not infrequently the issues presented are minor from the viewpoint of the public interest. Also, because of their unidentified origin and the unsystematic selection of signers (at least as far as the public knows), such pronouncements are likely to be taken as propaganda efforts by an interested group. Finally, in practice the questions are often ambiguously worded and do not offer a good opportunity of indicating clear-cut views on well-defined issues. Experience shows that occasional pronouncements of this sort, well intentioned and public spirited as their objectives may be, have done nothing in most cases to enhance the prestige of the profession—but, on the contrary, have tended to bring it under suspicion of being either unrealistic or influenced by some pressure group.

From the point of view of the Association, this is important because statements by a substantial number of its members are likely to be interpreted by some as expressing the views of the profession as a whole, or of the Association itself. This is prejudicial to its interests and to those of the vast majority of its less vocal members. Clearly the Association would not wish and is not in a position to do anything to interfere with the freedom of its members to express themselves publicly in any way they choose. That is their privilege, and one consistent with the texture of democratic ideas. But while nothing can be done to prevent such statements or to discourage them, the establishment of official polls would go a long way toward counteracting their harmful effect on the standing of the profession.

There are many issues on which there is practical unanimity among economists, while public opinion is widely divided. There are others, it is rumored, on which agreement has not been reached even among members of the profession. Clarification of the issues and focusing attention of the members on them would result in making many members feel a greater sense of their urgency and to induce them to review and organize their thinking in relation to the realities of the day in fields not confined to their immediate specialty.

At no time has it been more important for economists to have the respect and confidence of the public, or more necessary for the country to make the best possible use of the specialized training, knowledge, and

vision of economists. For society today is confronted with a vital issue. What must be decided in the immediate future is whether an answer to pressing economic problems can be found within the framework of capitalism and free enterprise or whether economic organization must move in the direction of socialism or communism, or whether a combination of the two systems offers the best solution. These alternatives involve political, moral and spiritual dilemmas, but the fundamental question is economic: shall enterprise continue largely under private ownership, or shall it be increasingly or wholly turned over to the state? From the socialist or communist point of view, the important questions appear to have been solved—many decades ago, while for protagonists of private enterprise answers to the questions are still to be developed. Communism places a period after its dogmas, in fact, an exclamation point, while a question mark is still discernible at the end of deliberations on economic dilemmas by proponents of individual enterprise. This appears to give the communist approach the advantage of certainty, and leaves capitalism under the apparent handicap of indecision. But in the long term, free enterprise may gain the more important advantage of greater flexibility, which makes it more adaptable to changing economic forces. Its opportunities are many, the challenge of events is vibrant, and all intellectual resources must be directed toward meeting it.

In this critical hour the economist and his Association have a great opportunity and a corresponding responsibility. On the discharge of this responsibility depends not merely the standing and future of the profession—but a vastly more important issue as well—the form of future economic life. For if economists cannot devise a way of making a system of free enterprise produce results satisfactory to the mass of the people, it is certain that the trend will be away from free enterprise and toward some form of socialist state; and while experience has not shown conclusively that a socialist state can tolerate spiritual freedom—which democracies value above all, neither has it been demonstrated that socialism must necessarily be totalitarian and is irreconcilable with freedom.

In the critical period ahead, when these questions must be answered by events, economists and their Association are under obligation more than ever to help in the development of correct solutions to pressing problems that confront the economy. On the development of such solutions and their incorporation into national and international economic policy of this country depends the progress of world reconstruction. For without the maintenance of economic strength in the United States and its use for rehabilitating the world, there is little hope for the future of western civilization.

The suggested method of testing the views of economists might be

one helpful step. Other ways of strengthening the profession's grip on reality need to be developed. Most of the members of this Association are not only economic thinkers but teachers as well. Promotion of better understanding of economic problems by future men of affairs and statesmen is not the least of the economists' obligations. But the economics they teach must reflect understanding of the forces that shape the changing economic world.

Economists, therefore, are under double obligation—for themselves and for their disciples—to perfect their implements and processes of thinking. They must beware of dogmas; avoid blind faith in free enterprise, in the all-curing beneficence of the entrepreneur's profit dollar without reference to the source whence it is drawn or the use to which it is put; as well as refrain from sole reliance on the hydraulic strength of the income stream, or the salutory nature of the dollar spent by the consumer, regardless of who he may be or the rationality or wastefulness of his expenditure. They must subject to searching analysis the effects of outlays by the state, the investor, the producer, and the consumer. They must be conscious of the importance of all four phases of national income: its source, its magnitude, its distribution, and its use. Likewise they must not fall into the error of depending on the quantity of money alone as an adequate regulator of economic developments, or adopt the reverse doctrine that the amount of money is an unimportant and irrelevant condition with little or no bearing on prices or the course of events.

No set of statistical series, to say nothing of any single series, is a sufficient basis for determining causal relationships on which economic policy can be predicated with safety. They are only indications of where one should look for the causes and interrelationships that determine economic events. When it is said that statistics are the economist's conscience, what is meant is that they indicate the limits of the territory in which the economist may tread with assurance on the hard surface of fact. They do not restrict his freedom of exploration in the less easily traveled lanes of intelligent surmise and imaginative understanding. A good economist need not be a seer but he must not wear blinders; and he must have the seeing eye.

In order to perform their function adequately, economists must adhere rigidly to the discipline of thorough analysis of conditions as they are and not permit themselves to be blinded by preconceived theories or by transitory considerations of expediency. Lasting economic health would not be achieved by sole dependence on the encouragement or limitation of savings or on the promotion of adequate investment or consumption; or on the expansion and contraction of the supply of money. Great leaders who, under the stress of current conditions, have evolved systems of economic concepts modify, expand, or alter these

concepts under different circumstances and as their own thinking progresses. Followers must be on the alert not to become more royalist than the King.

If economics is the study of man in the process of producing and consuming what he needs and what he wants, then it is apparent that the subject matter of his inquiry is constantly shifting. Not so many years ago no one needed or wanted gasoline because the motor car had not been invented, and no one wanted moving pictures or radios because they had not yet been imagined. A horse-and-buggy economist in a motor age is of no greater use than an isolationist in the atomic era. An economist, in order to merit this designation, must keep his mind open to the realities of the ever changing pattern of economic life. When his thinking becomes rigidly confined by a set of unchanging dogmas, his usefulness rapidly declines while the amount of mischief he may do becomes formidable.

The success of the economists' efforts, however, even if they do their best, will depend on the behavior of the different economic groups which make up society and on effective organization of the state. But, while progress in the rationality of the behavior of economic units is necessarily a slow process to which understanding of economic forces can contribute a great deal but only gradually in the course of time, better adaptation of the machinery of government to the tasks it must perform in modern society is an essential preliminary step long overdue in the upward climb toward a smoothly functioning economy.

For progess on this road better organization of the government, more direct and effective ways of translating programs into action must be devised and instituted. Democracy, it has been said, is the rule of mediocrity. There is an element of truth in the allegation. For mediocrity represents the average, and a rule of the majority cannot be too far removed from the understanding of the average. While leadership in a democracy must remain in touch with the average, it should strive to be ahead. It should lead—not follow. Leadership that is below the average is disastrous; leadership that is on the level of the average holds little promise of advancement. Leadership that is ahead of the average results in progress. It may make all the difference between a rise and a decline in the tide of a nation's life.

Consequently, government must be so organized as to encourage better than average leadership and assure it of the country's support. This is the opposite of what actually prevails. It is regrettably true that existing governmental organization is such as to make it well nigh impossible even for brilliant leadership to achieve progress, except at times of crisis and then only at great hazard and with much delay.

We have a Congress which has great powers and is controlled by one

of the two leading political parties. The position of Congressmen on vital issues, however, is not determined by their party allegiance. The economic views of progressive Democrats, for example, are much farther removed from those of conservative Democrats than those of individual progressives or conservatives of either party are from each other. This is so well known that it is almost a platitude. And yet, at the risk of platitudinousness, it needs to be restated because of less obvious implications. For this means that in choosing a member of Congress the voter has no assurance that the party designation of his candidate insures his taking certain positions, even on vital issues. Unless the voter knows the views of a candidate on a variety of problems, he votes in the dark. Some system under which the platform on which a party is elected to office will indicate the line of policy that its individual members are pledged to carry out is an essential part of a rational and effective democracy. We have no such system. It is imperative that one be established. With such a system in effect, pressure groups representing special interests would have considerably less opportunity to influence legislative action.

In the course of time terms of office of Congressmen should be so modified as to make impossible the frustration and stalling of government that occurs when the majority of Congress belongs to a different party from that of the executive. This, however, would require an amendment to the constitution and would be a slow process. The urgency of such an improvement in legislative machinery is obscured by the lack of likemindedness within the parties. It is significant and hopeful, on the other hand, that many of the other changes most urgently required for rationalizing government can be accomplished not only within the existing terms of the constitution but for the most part even without legislation—by the adoption of effective practices and the establishment of a tradition of responsibility in government.

Recent improvements in the internal organization of Congress under the La Follette bill are important steps in the right direction and hold a promise of better functioning of the legislature. But in order to serve the purposes of democracy adequate means must be devised to make Congress a more effective instrument for carrying out the will of the electorate. A machinery of government under which the President and members of Congress, who were elected at the same time on the same platform and have the same party allegiance and the same mandate from the people, cannot coöperate on major issues is one that frustrates the democratic process.

Coördinate with Congress stands the executive, with powers derived in part from Congress and in part directly from the constitution. To function effectively it must have organized machinery for coöperation

with Congress. Experience has demonstrated that voluntary, irregular contacts are not enough. A regular statutory line of authority between the executive and the legislative arms of the government is needed.

The executive itself should be so organized as to be in a position to initiate programs expressive of broad national policy, and when approved by Congress, to carry them out as a coördinated undertaking—through the different parts into which the executive branch of the government is subdivided. As the government is constituted, there was until recently no agency for formulating national policies, no provision for regular consultation with the legislative power, and no machinery for coördinating the activities of the ten regular departments and the numerous independent agencies, boards and commissions. The only place where the power of coördination is lodged under the existing system is the White House. And as a consequence, too much responsibility, too much detailed work, and too much omniscience is expected of one man—the President, who, in order to discharge the superhuman duties piled upon him, needs to be a paragon of physical endurance, of wisdom, energy, tact, and showmanship, as well as of political strategy. The result is that Presidents are killed by overwork and yet can rarely achieve a complete and continuous program of national policy.

For the President does not have the support of a Cabinet with joint responsibility for national policy. Such a Cabinet does not exist in this country. There is only a group of men, charged with specific duties in separate fields, with the President alone as a unifying and reconciling factor. The extent to which problems of national policy are discussed at Cabinet meetings is not generally known. But that there is no recognition of joint responsibility for adopting policy is clear. It is also apparent that there are jealousies and a constant jockeying for power. Furthermore, many of the most important functions of the Executive are entrusted to agencies not represented at the Cabinet table at all—and subject to no control except by remote direction of Congress and infrequent contacts with the over-worked and necessarily inaccessible Chief Executive. The course of government may be pictured as an obstacle race—beset by many hurdles and run simultaneously on many courses, with but one judge who is under pressure to look in all directions at once and to make prompt decisions of vital importance, without opportunity in many instances to consider comprehensively all the elements involved. This system is a heritage of a past era, when the duties of federal government were infinitely simpler. It needs to be remodeled in order to be equipped to handle effectively the numerous pressing problems of a modern state. It has been well said that every human institution must change if it is to last. It would be tragic if at this critical time the country's efforts to achieve domestic and world reconstruction were frustrated by worship at the shrine of vested error.

This country abandoned traditional *laissez-faire* largely because recurrent booms and depressions had demonstrated the inefficiency of unregulated private enterprise, its inability to cope with the problems of a complex society. If government in turn shows itself incapable of dealing effectively with these problems, then in what direction will the country move? Will it be toward communism, fascism or anarchy? There is little solace for America in any of these alternatives. Preservation of democracy is the country's wish, but if democracy is to be preserved, it must function efficiently. Its ideals must be implemented and made secure by governmental machinery capable of carrying out the people's will effectively and without undue delay.

The need for better organization of policy formation has been recognized for a long time and its urgency has become more apparent during the great depression of the thirties and during and after the Second World War. Its acuteness has not abated but increased during the present period of reconstruction.

One important move toward better coördination of government activities was taken when the Act putting into effect the Bretton Woods Agreements provided for a National Advisory Council on International Monetary and Financial Problems to consist of the Secretaries of the Treasury, State, and Commerce, the Chairman of the Federal Reserve Board, and the Chairman of the Export-Import Bank. This Council has the function of considering with the American representatives on the International Monetary Fund and the International Bank for Reconstruction and Development the general policies to be pursued by the United States in the field of international finance, and particularly matters in which decisions of these two institutions are subject to approval by the United States. The Council is directed to coördinate, so far as practicable, the policies and operations of the representatives of the United States on the Fund, the Bank, the Export-Import Bank, and all other agencies of the government engaging in foreign financial transactions. It is required to make periodic reports to the President and to the Congress. Since its organization the Council has been extremely active and has represented the United States in negotiations in connection with the British credit and the loans to France. Formal organization of interdepartmental coöperation in international finance through this Council is a constructive development of a high order of importance and promise.

A potentially more important step was the adoption, after much discussion and debate, of a law, known as the Employment Act of 1946, approved by the President on February 20, 1946. This date may mark the first step in the process of rationalizing the government on an overall basis and organizing American democracy to fit modern conditions. The Act, in effect, declares it to be the continuing policy of the federal gov-

ernment to encourage opportunities of employment for all who are willing and able to work, and to promote employment, production, and purchasing power. In form the law deals primarily with one aspect of economic life, employment, but the different facets of economic activity are so interrelated that a successful policy assuring continuous employment would require and assure stability of production, prices, and other phases of life as well. The statute is couched in negotiated language, representing compromises between different points of view. Perhaps this should make it easier for its administrators to command broad support. It is beyond doubt that the Act provides a foundation for coördinated national economic policy.

It requires the President to transmit to Congress every year at the opening of the session, an economic report covering in substance all important phases of the nation's economic life, together with a program of action. In addition, the President may from time to time transmit supplementary reports.

The Act sets up a Council of Economic Advisers to assist the President in the formulation of his economic reports. It also creates a Joint Committee of Congress to receive these reports and to make studies of its own, and on this basis to transmit to the Senate and House of Representatives its own reports containing its findings and recommendations.

This Act contains, in embryo, what is necessary to start the government on a road to more effective action. It recognizes the unity of the problems handled by the different departments and agencies, it gives the President the kind of help and support that he requires and is entitled to in the discharge of his great responsibilities, and it improves the procedure for coöperation between the executive and the legislative branches of government. A stronger and more formal link must be forged in the near future, but the present law represents a step in the right direction.

This statute has been enacted so recently and the Economic Council has been constituted for so short a time that it is too early to judge of its effectiveness in actual operation. Its possibilities, however, are far reaching; it needs the support of all citizens, and more particularly of this Association, whose former president has been appointed as chairman of the Council. The country cannot afford to have this promising start become lost in the mazes of official red tape, or in conflicts for power among agencies. It must become the beacon light leading toward a new and more adequate machinery of government in a democracy.

The Council is at present in the experimental stage. On how it is developed and how much importance it gains in shaping the country's economic policy will depend whether it will signalize a momentous step forward in the democratic process or merely the emergence of another in a long series of agencies issuing reports.

Programs worked out by the Council must be so realistic and convincing, so well thought out and adapted to the country's needs, so thorough and so practical as to win acceptance, in whole or in large part, by the President. His report to Congress, prepared in the light of the Council's recommendations, would then be such as to enlist the support of public opinion. Congress and the Executive should then stand together for the enactment and administration of such laws and policies as the country's needs demand.

There are in this possibilities of gradual but vital improvement in our economic life. If the Reports become established as the recognized authoritative basis of action—the recommendations would become binding on all heads of government departments and agencies. There would be less bickering, misunderstanding, and cross-purposes between branches of the government. A Cabinet member or the head of an agency would have the sole choice between supporting the program adopted by the government or resigning.

The sound view that for an official on the Cabinet level the only alternatives as a matter both of effective public policy and of personal self-respect, is to coöperate or to resign has never been established in this country. There is instead a dangerous practice of remaining in office against one's convictions in order not to split the party, and an inclination to refuse to quit under fire. These may be good rules of conduct, when party loyalty or personal integrity is in question, but not when the issue is one of national policy.

The ideal attitude of a Cabinet minister toward the Cabinet is described by Viscount Grey in these significant words:

" . . . to put his mind into the common stock; to work sincerely in matters of difference of opinion and difficulty for a Cabinet decision. This does not mean that what is regarded by a minister as vital to the public interest should be compromised. *A minister should resign rather than agree to that* [italics supplied]. It means that a minister should not press his personal views unduly about what is not essential, that he should contend for substance not for form, that he should consider without *amour-propre* how his own opinion can be reconciled with that of others. Subject to the one qualification of not sacrificing what he regards as vital to the public interest, he should not contend for victory, but for agreement in the Cabinet.

"The other qualification is that of accepting full personal responsibility for Cabinet decisions, when once agreed to."

This is a statement about a responsible Cabinet of the British type—by a distinguished member. Adoption of similar principles in an American setting appears to be the only alternative to governmental fumbling.

A clear-cut administrative policy, with all the heads of government

departments committed to its support, would carry great weight with the public, which placed it in power. It would also impress Congress. Adoption in some form of the proposal for Cabinet members to appear before Congress in person and answering questions in open meeting would contribute further to coöperation between branches of the government and to recognition of complete accord on policy by the administration. It may be feasible for candidates for the Presidency to name their cabinets before election, so as to make the ministers more conscious of their responsibility to the people, the ultimate source of their authority.

An American form of responsible government could develop out of the beginning made by the Full Employment Act if it is supported by the adoption of practices that would increase its effectiveness. The organization and principles laid down by the constitution and sanctioned by American tradition would be preserved, and at the same time the government would become more purposeful and more responsive to the demands of changing conditions.

To economists and to this Association, the recent step toward a better formulated and better implemented public policy is not merely a matter of general interest. It is a Council of *Economic* Advisers that has been established and it is the Council's *Economic* Reports that are expected to constitute the heart of public policy. This new instrument of government gives the profession of economists a broad opportunity of rendering greater service to the nation and places on them and on this Association a correspondingly grave responsibility.

What Congress has said to the economist is in the language of the gaming table: "Put up-or shut up!" That's the economist's dilemma. Since economists by occupational selection and by training are not able to shut up—the only alternative is to put up, that is, to produce the men, the data, and the understanding, and to promote the public support essential to the execution of effective economic policy. To this purpose the efforts of economists and of their Association must be rededicated on this its Diamond Jubilee. The Ivory Tower has been conquered by events and razed to the ground. The economist is out in the open and must come to grips with problems of state.

THE PROSPECT FOR ECONOMIC GROWTH

By C. Reinold Noyes*

The purpose of this article is a limited one. It concerns itself only with the longer term prospect for a resumption of economic growth in the private economy of the United States. It is not an attempt at any general interpretation of past events. In line with that purpose, I have commenced with a broad over-all examination of the pertinent evidence, and have then narrowed down the field of inquiry by the successive exclusion of certain possible interpretations of that evidence which the facts seem to disprove. I have also left out of consideration entirely all conditions or influences which appear to have been temporary and which in the absence of great depressions or great wars, need not be expected to recur. There remains one strategic factor, already evidenced in the pre-war period, which cannot be excluded and which shows the earmarks of a permanent organic change in the economy. On that I base an appraisal of the prospect for future economic growth.

I

Professor Simon Kuznets' estimates of commodity flow and of capital formation, which have been appearing during recent years in a series of publications of the National Bureau of Economic Research,[1] give evidence of a rather startling change that has taken place in the behavior of the American economy. From the beginnings of the colonial settlement, over 300 years ago, there has been accumulated out of savings in this country some 300 billion dollars worth of reproducible wealth[2]—using Kuznets' most recent estimates, in 1929 prices and based on capital formation data.[3] Presumably the rate of accumulation was, at first,

* The author is president of the National Bureau of Economic Research, Inc.

[1] References in the notes below will be made to these studies by Kuznets under the titles only.

Simon Kuznets, *Commodity Flow and Capital Formation* (New York, Nat. Bur. of Econ. Research, 1938), *National Income and Its Composition, 1919–1938* (New York, Nat. Bur. of Econ. Research, 1941), *National Product in Wartime* (New York, Nat. Bur. of Econ. Research, 1945), *National Product since 1869* (New York, Nat. Bur. of Econ. Research).

Professor Kuznets has kindly permitted me to quote from the manuscript of the last, which at this writing, is still "in press."

[2] Other than "household."

[3] *National Product since 1869*, Table IV 10. In this form of citation, used throughout, the roman numeral refers to the part of the book, the arabic numeral to the number of the table.

very slow. As of 1879, Kuznets' estimate for the accumulated total is only about 36 billion dollars.[4] In the succeeding five decades the total grew by large and steadily increasing increments. Then, for the decade January 1st, 1929, to January 1st, 1939, the growth was very small—less than that for the year 1929 alone, which is included in that decade.

TABLE I.—REPRODUCIBLE WEALTH OTHER THAN HOUSEHOLD[a]
(1929 prices, in billions of dollars)

	Total	Increase
Jan. 1, 1879	35.9	
Jan. 1, 1889	62.0	26.1
Jan. 1, 1899	101.2	39.2
Jan. 1, 1909	151.8	50.6
Jan. 1, 1919	217.7	65.9
Jan. 1, 1929	287.9	70.2
Jan. 1, 1939	298.3	8.4 (10.5 in 1929 alone)

[a] See *National Product since 1869*, Table IV 10.

It appears that, for the first time in our recent history and perhaps for the first time in our entire history, the process of growth in reproducible wealth has practically ceased for an entire decade. Moreover, at this writing seven years have already passed out of the current decade which will end January 1, 1949. If the guesses made below as to 1944 and 1945 turn out to be justified, there has been no growth in "non-war" reproducible wealth for the first seven of the current ten years.

The "startling change," referred to above, is confirmed and emphasized by an examination of more detailed data. In Kuznets' most recent and most complete annual series for capital formation, the last quarter-century, 1919 to 1943,[5] may be divided into two nearly equal periods—one of twelve years from 1919 to 1930, inclusive, and one of thirteen years from 1931 to 1943. For the whole of the first period net capital formation amounted to 74.6 billion dollars; for the whole of the second it had fallen to 2.6 billion dollars. These figures include only what Kuznets now calls "non-war" net capital formation, an adjustment that applies only to public capital formation. If we are permitted to guess that the ultimate estimates for 1944 and 1945, the last two years of the war, will turn out to duplicate approximately those for 1942 and 1943, the first two years of the war, then the picture becomes even worse. Then,

[4] In a private communication, Professor Kuznets suggests that the relatively small size of the early figures in this series may exaggerate the actual contrast. In part, it may be due to certain limitations and exclusions in the data.

[5] Since Kuznets' present published estimates end with 1943, our use of his data must end there.

for the whole fifteen-year period from 1931 to 1945, non-war capital consumption has exceeded non-war gross capital formation by 9.5 billion dollars.

Analyzed into the three main components which Kuznets establishes, the data may be summarized as follows—again estimating 1944–1945 to have been the same as 1942–1943:

TABLE II.—NET NON-WAR CAPITAL FORMATION[a]
(1929 prices, in billions of dollars)

	Business	Residential	Non-war Public	Non-war Total
1919–1930 (12 years)	+44.8	+14.7	+15.1	+74.6
1931–1943 (13 years)	−0.1	−8.6	+11.3	+2.6
1931–1945 (est., 15 years)	−9.7	−11.2	+11.4	−9.5

[a] *National Product since 1869.* Non-war public capital formation is derived by deducting col. 8, Table I 16 from col. 6, Table I 7.

Residential capital formation is derived from col. 1, Table I 7 after deducting depreciation taken from the following sources: For the years 1919 to 1935 depreciation is derived from *Commodity Flow and Capital Formation*, line 6 of Table VIII 3, 1929 prices. For the years 1936 to 1939 I have used further estimates furnished me by Solomon Fabricant, whose estimates in *Capital Consumption and Adjustment* (New York, Nat. Bur. of Econ. Res., 1938), were used by Kuznets in the above. For the years 1940 to 1943, or 1945 I have merely extrapolated from this series. Any error cannot be significant.

Business capital formation is then derived by deducting the sum of these two series from col. 4, Table I 17 in *National Product since 1869.*

The first period of twelve years, from the close of World War I to the onset of the great depression, was one of almost continuous prosperity and growth. An average of about 3.75 billion dollars per year went into net business capital formation; an average of about 1.25 billion dollars per year went into net increase in the value of housing; and an average of about 1.25 billion dollars per year went into public non-war net capital formation—probably largely through state and local governments.

The second period of fifteen years includes the great depression and World War II. During that time the net value of existing housing diminished by an average of about 0.75 billion dollars per year; this was approximately counterbalanced by positive net public non-war capital formation (average 0.75 billion), leaving an average negative quantity (of about 0.65 billion) for business net capital formation to produce the negative total.

It might well be that the great depression and American participation in World War II were sufficient conditions to account for the fact that private net capital formation was almost certainly negative for the full period, 1931–45. Let us see, then, what the estimates show for the briefer

period between these two episodes. It happens that the seven years 1935–41 make the best showing of any seven consecutive years in the second period. By 1935 we had made a good beginning in the recovery from the depression. Only at the very end of 1941 did we ourselves enter the war. The corresponding best seven consecutive years in the first period were 1923–29.

TABLE III.—NET NON-WAR CAPITAL FORMATION
(1929 prices, in billions of dollars)

	Business	Residential	Non-war Public	Non-war Total
1923–1929 (7 years)	+32.5	+14.6	+9.9	+57.0
1935–1941 (7 years)	+25.7	−0.7	+6.6	+31.6

In the second seven years, 1935–41, total net capital formation was little more than half what it was in the first seven years, 1923–29. Non-war public net capital formation declined in the second seven years by about one-third from the level it reached in the first seven years. Net capital formation in housing disappeared altogether, in contrast to a positive average per year of over 2 billion dollars. But business net capital formation was, in the second, nearly four-fifths of what it was in the first seven years. When, however, we examine the components of this business net capital formation we find that over 60 per cent of it (16 billions) was concentrated in the last two of the seven years and that, of this 16 billions, more than half (9.5 billions) took the most ephemeral forms—increases in inventories and in private foreign claims.[6] Obviously, 1940–41 resembled 1915–16 in that, at both times, we were receiving the full impact of war buying from abroad before we were ourselves implicated. This considerable fillip to business from war-making somewhat distorts the comparison. If net business capital formation for the whole seven years had averaged what it did for the first five (1935–39), it would have run about 13.5 billions, or about 40 per cent of that of the years 1923–29.[7]

Interpreting these data in general terms and contrasting the second with the first period, we may say (1) that, both for the full periods and for the best seven years compared, while net non-war public capital formation diminished somewhat, nevertheless it remained at a high level; (2) that, for the whole periods net value of housing contracted, in

[6] *National Product since 1869*, lines 3 and 4, Table I 12.

[7] If my purpose were to make the strongest possible case for a preconceived thesis, I would naturally not select these two briefer periods for comparison. The reason for doing so is that such is not my purpose.

the second almost as much as it expanded in the first, and that even for the best seven years there was no expansion in this category in the second, while there was a very large one in the first; (3) that business real capital stood in 1945 considerably below the point at which it stood at the end of 1930, whereas it had increased by 45 billion dollars in the twelve years previous to 1931, and that even for the years of recovery from the depression its increase was considerably less than for the previous like period, while a major part of this increase was temporary and under the influence of war demand from abroad. In other words, it is clear that the "startling change" referred to above has not taken place in the public economy; it has been confined to the private economy. If so, the only bearing of this record on the future prospect for economic growth lies in the field of the private economy. Total private net capital formation, which was positive to the extent of nearly 60 billion dollars from the end of World War I to the onset of the great depression, apparently became negative to the extent of some 20 billion dollars from then on until the end of World War II. Since 1930 the private economy in the aggregate has not only failed to create any new net real capital; it has not even maintained its net real capital intact.

In terms of these data the private economy is divided into two parts, business and housing. It is clear that, in the field of business, this phenomenon may have been independent of that in housing. Let us consider

TABLE IV.—FLOW OF GOODS TO CONSUMERS[a]
(1929 prices, in billions of dollars)

	1919	1929	1919–1929 Increase	1919–1929 Increase *per capita*	1941	1929–1941 Increase	1929–1941 Increase *per capita*
Perishables	19.9	28.0	+40%	+20%	40.4	+44%	+32%
Semi-durables	7.5	11.8	+57%	+35%	12.5	+6%	−3%
Durables	5.0	8.8	+76%	+51%	9.3	+6%	−3%
Services	17.8	27.8	+56%	+34%	33.3	+20%	+10%
Total	50.2	76.4	+52%	+30%	95.5	+25%	+14%

[a] From *National Product since 1869*, cols. 6 to 10, Table I 5.

the business sector alone. The business sector of the private economy is wholly responsible for the flow of goods to consumers, as this is now measured. At first sight it is rather difficult to reconcile the apparent cessation of growth, or the actual decline, in business real capital with the increase in the annual flow of goods to consumers which has taken place in approximately the same period. Kuznets' estimates of this flow (in 1929 prices) show an increase between 1929, the best year up to that time, and 1941, the best year in his series, which amounts to 19.1 billion

dollars.[8] Theoretically, we would assume that such an increase, about 25 per cent, would require an expansion in plant and equipment, and therefore net capital formation, in order to make possible the additional product. Examination of the components of this flow suggests why it did not.

It is evident (1) that the improvement in the average standard of living, so far as that can be measured in these real terms, which took place between 1929 and 1941 was less than half the improvement between 1919 and 1929; (2) that it consisted largely in a marked increase in the purchase of perishables and some increase in the consumption of services; (3) and that, so far as new purchases were concerned, there was a contraction in semi-durables and durables. Moreover, when these figures are given in current prices the picture is considerably clarified. Except for services in the first period, there was a decline in prices in all categories during both periods.

TABLE V.—FLOW OF GOODS TO CONSUMERS[a]
(Current prices, in billions of dollars)

	1919	1929	1919–1929 Increase	1919–1929 Increase *per capita*	1941	1929–1941 Increase	1929–1941 Increase *per capita*
Perishables	24.4	28.0	+15%	−1%	32.6	+16%	+6%
Semi-durables	10.1	12.1	+20%	+3%	11.3	−7%	−15%
Durables	5.4	8.8	+63%	+40%	9.0	+2%	−7%
Services	14.0	27.8	+99%	+70%	28.6	+3%	−6%
Total	54.0	76.7	+42%	+22%	81.5	+6%	−3%

[a] From *National Product since 1869*, cols. 1 to 5, Table I 5.

In 1929, the average person spent 22 per cent more to get 30 per cent more goods and services than he did in 1919; in 1941, he spent 3 per cent less to get 14 per cent more goods than he did in 1929. The gain in the average standard of living in the first period resulted from spending no more for a considerably larger quantity of perishables and semi-durables, much more for an even more largely increased quantity of durables, and nearly three-quarters more for about one-third more services. Such gain as there was in the average standard of living in the second period resulted wholly from a decline in prices in each rubric. In fact, the total flow of goods to consumers in the second period, though it shows an increase of over 19 billion dollars in 1929 prices, shows an increase of less than 5 billions in terms of current prices, almost all of which was in

[8] The reason for using 1941 rather than the latest year in Kuznets' present series is, not only that it is the best, but also that it is the last pre-war year.

perishables. We conclude that, accompanying the cessation in business capital formation, there was also a cessation in the improvement in the scale of living, at least in respect of semi-durables and durables which require large capital investment. And these, be it noted, have constituted, during recent decades, the chief addition to the American standard of living.

Summing up these findings, it appears that, for the first time at least in our recent history, economic growth in the business sector has practically ceased for a full decade. At the beginning of the late war business real capital stood at about the same level as in 1930; so did the flow to consumers of the chief capital-requiring goods.[9] That is the more conspicuous feature of the cessation of net capital formation in the private economy. But, accompanying this "startling change," there was also an unusually severe and prolonged contraction in residential construction.

Now these facts and figures are not "news." This period and its peculiarities form the subject of an already enormous literature. But these particular features of the period are reproduced and emphasized because they constitute the natural starting point for the special inquiry undertaken here. If, in the immediate pre-war period private net capital formation ceased for ten or more years, one is led to suspect that something must have gone wrong with the saving function. If, in the pre-war period something went wrong with the saving function for as long a time as ten years, the same malfunctioning might reasonably be expected to reappear in the post-war period. If so, the question of the prospect for economic growth would be settled for us. No matter how favorable to economic growth other conditions may be, if the saving apparatus is not functioning, there will be no growth.

II

Following up this clue, let us attempt to determine whether changes have occurred since 1930 in the quantity, source or direction of savings which might account for the cessation of private net capital formation. For this purpose we have to bring our analysis in terms of capital formation into conformity with one in terms of real income. Net capital formation, in Kuznets' terms, requires real saving—that is, it can only be financed out of income that is saved and invested, not spent or hoarded in the form of money.[10] This income arises at three clearly defined

[9] If the comparison is made with 1943 (instead of 1941), which is the latest year in Kuznets' current estimates, it would be somewhat more unfavorable in both respects. That is, both changes would then be negative.

[10] Since our estimates of net savings are all in real terms (*i.e.*, assume investment), we not only cannot but do not need to consider hoarding here.

Nevertheless, the point is an important one. Hoarded money, either currency or created

levels, governmental, corporate and individual. A fourth level, the income of non-incorporated business, is included with business income, for some purposes, and with individual income for some other purposes. Saving at the first two levels does not appear as saving at the third level.[11] Saving at any level can be transferred to any other level to be used for capital formation there; or, having regard to the whole, real saving at one level may be counterbalanced by real dissaving at others, so that no *net* capital formation takes place in the aggregate.

A. *Government*

The various governments, from national down to local—the public economy—may effect their own real saving out of tax revenues or out of revenues from public services in excess of current expenses. Such real saving does not appear first as savings by the individuals or corporations of the private economy from which the tax or service revenues are derived. If the saved taxes or other receipts are derived from the capital rather than from the income of the individuals or corporations, real saving by government is offset by real dissaving on the part of the individuals or corporations. On the other hand, governments may rely on real saving at other levels. They may borrow, for the purpose of capital formation, from individuals or corporations. The funds so transferred may consist of the individuals' or corporations' new savings. Then the net capital formation in the public economy corresponds to the new savings of the private economy and is a net real increase. Or the funds so borrowed may consist of the equivalent of depreciation reserves not expended for replacements or of the proceeds of other real assets not replaced (inventory, etc.). Then the positive net capital formation by government is offset by negative net capital formation on the part of individuals or corporations. In the aggregate, disregarding financing of one government by another, net capital formation by governments can only be financed from their own real savings, or from the real savings, new or old, of the private economy. Finally, it is also possible for capital consumption to exceed gross capital formation in the case of any single government and therefore for the aggregate of governments.

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deposits is, of course, not spent or invested. The concept is a difficult one to define and the magnitude is an almost impossible one to measure. For, in some sense, all cash on hand is hoarded. Moreover, increase or decrease in total money outstanding seems to negative or to exaggerate the effects of hoarding. But such increase or decrease must increase or decrease somebody's cash on hand. Is this hoarding or dishoarding? The changes in the quantity of money, both up and down, have been radical in these two periods, but their effects have been difficult to trace. Someone should make a special and thorough study of this matter.

[11] That is, the funds saved by governments and corporations have not appeared as income to individuals and therefore, of course, not as individual savings.

B. *Business*

1. *Corporate.* With corporations taken as a whole, as with governments, net capital formation can be financed from undistributed corporate profits, in which case it does not require prior saving by individuals; or it can be financed by new capital issues, etc., in which case it appears first as savings by individuals or as the equivalent of unspent depreciation reserves by individuals (residential). These savings may be transferred directly or through government. Again, in the aggregate, corporate net capital formation can only be financed from these two sources. And, again with corporations, capital consumption may exceed gross capital formation in particular cases and therefore for the whole.

2. *Non-corporate.* Since all net profits of unincorporated firms, individuals or partnerships—or entrepreneurs, as they are called in this connection—are treated for tax purposes as the personal income of the participants, there is no rubric corresponding to undistributed profits in this case. Nevertheless, a distinction does exist between business income plowed back by the participants and loans to, or other investments in, such firms made by non-participants or new participants. Only the first, the internal net savings, are here called "entrepreneurial net savings." Net capital formation may be financed from either source. And, again, the failure to maintain real assets results in negative capital formation.

C. *Individuals*

The only form of net capital formation by individuals, other than entrepreneurs, which is included as such by Kuznets, is residential building.[12] This may be financed out of the savings of the individual himself; or it may be financed, partly or wholly, out of the savings of other individuals. The rest of the savings of individuals is delegated for real investment either to government or to business. The customary ways in which this has been done are rather markedly differentiated as between two segments of the population.

1. *Small Investors.* The savings of a very large portion of the people, including most of those whose incomes are below the higher brackets, constitute what are regarded by the savers as "rainy-day" funds. Since the principal as well as the income of these funds is intended for ultimate expenditure, they constitute, in the aggregate, a revolving fund. Because the ultimate dissaving is the prime purpose of the individual saver, this revolving fund only increases by the difference between sav-

[12] Merely for simplicity in exposition we are treating all residential net capital formation, positive or negative, under individual saving. True, governments and corporations or entrepreneurs (business) do participate in this financing. But, for the most part, neither do so with their own savings. They are merely intermediaries for individual saving.

ing and dissaving. A large portion of these savings has, in the past, been placed in the hands of life insurance companies, savings banks, etc. These savings institutions are restricted, in part by law and in part by conservative practice, so that actual real investment, if it occurs, is achieved chiefly *via* three channels, loans to government, loans to large business, and loans upon residences.[13] To some extent small savers have handled their own savings, particularly to finance their own housing and, more recently, for the purchase of government securities.

2. *Large Investors*. A relatively small portion of the people, whose incomes are in the higher brackets and who have, therefore, what are called "surplus" incomes, handle their own savings for the most part. They invest for income and expect never to spend their principal, which they regard as "sacred." Therefore, except for losses, increments from new savings and capital gains are all net and constitute, in the aggregate, a permanently growing, not a revolving, fund. In the past it has been supposed that these "surplus" incomes were the chief source of all savings.[14] At any rate, so far as "equity" capital for new or old businesses is concerned, that has probably been true, And, since business, unlike government, requires an "equity" behind its debts, the financing of all net capital formation by business would seem to rely upon these individual investors for about half of its requirements over and above what can be supplied, in each individual case, by the undistributed profits of corporations or the plowed-back income of participating entrepreneurs.

Available data do not make it possible to draw up really precise estimates of the changes that have taken place since 1930, as compared with the period 1919 to 1930, in respect of the magnitude and direction of these ultimate flows of the several types of savings which permit the several types of net capital formation. Nevertheless, Table VI sketches in rough outline the broader features of both kinds of change. And, as is usually the case, this rather crude appraisal has to serve as the basis for analysis. Since conditions changed so radically after our entry into World War II, it will simplify matters if we now limit the period since 1930 to the years before we entered World War II—that is, if we cut short that period at 1941. This will also serve better for a forecast of post-war and, we hope, peace times; though for that we will have also to recognize the legacy left by the four years of war. But, since our data as to savings for the first eight years of this period (1931–38) can be

[13] It is hardly necessary, any longer, to include loans on farm land.

[14] For instance, Professor F. A. Fetter says in "Lauderdale's Oversaving Theory," *Amer. Econ. Rev.*, Vol. XXXV, No. 3 (June, 1945), p. 267, "As a commonly observed fact, the greater part of the saving in modern communities is of this nature [*i.e.*, does not necessitate an actual reduction in the amount of consumables]. It is the action of fairly well-to-do or rich savers that are not skimping and denying themselves the enjoyment of their habitual amount of consumables . . . ."

TABLE VI.—NATIONAL REAL BUDGET*
(Current prices, in billions of dollars)

	1919–1930 (12 years)		1931–1938 (8 years)		1939–1941 (3 years)	
Individuals						
Net savings	+47.8[a]		+29.4[a]		+17.2[f]	
Residential net capital formation		+14.2*		−5.2*		+3.1*
Transfer to government		+9.7[b]		+22.0[d]		+14.1[f]
Transfer to business		+23.9		+12.6		
Governments						
Net savings	+18.1[b]		−4.9[c]		−1.9[f]	
Transfer from individuals	+9.7[b]		+22.0[d]		+14.1[f]	
Non-war net capital formation		+16.1*		+7.7*		+2.8*
War net capital formation		+11.7*		+4.2*		+9.4*
Transfer to business				+5.2[e]		
Business						
Net saving corporations	+10.9[c]		−20.1[c]		+11.4[f]	
Net saving entrepreneurs	+15.9[c]		−6.2[c]		+3.8[f]	
Transfer from individuals	+23.9		+12.6			
Transfer from governments			+5.2[e]			
Business net capital formation		+50.7*		−8.5*		+15.2*

* This table is given the same name and is constructed on a basis similar to the one contained in President Truman's Budget Message for the fiscal year 1947. Items starred are from *National Product since 1869*. For items not starred see footnotes below. All other items are imputed to balance. Since all estimates are made in real terms, figures in each sector must balance. Therefore they are net transfers only. Transfers, of course, include not only new capital or loans, but inter-sector exchanges of liquid (non-real) assets for real assets. For instance, if business holds government bonds, it may sell these to individuals and thus secure the funds for net capital formation. But this is a transfer from individuals to business.

[a] These estimates of individual savings are modifications of those given by Kuznets in *National Income and Its Composition, 1919–1938*, p. 276. There he estimates individual savings as a residual after deducting the other directly estimated categories of savings from net capital formation. But since his new estimates (*National Product since 1869*) show greater net capital formation for the first period and less for the second, I have increased his estimate of individual savings, 1919–30, by 0.5 billions and decreased it for 1931–38 by 6.6 billions.

[b] This estimate of net savings by governments is taken from *National Income and its Composition, 1919–1938*, pp. 276 and 814. The figure for transfer from individuals to governments is the difference between these savings and governmental capital formation. Kuznets estimates net increase of public debt for the period at only 6.8 billions (*loc. cit.*) If we were to accept this lower figure for transfer from individuals (or business), it would be necessary to increase the estimate of government savings by 2.9 billions, and to decrease individual savings, which is a residual, by the same amount.

[c] These are the directly estimated net savings as given in *National Income and its Composition, 1919–1938*, pp. 276 and 814.

[d] This is Kuznets' estimate of net increase in government debt for the period. See *National Income and its Composition, 1919–1938*, p. 814.

[e] The increase in "other" federal security assets for this period was 6,813 millions. See *National Income and its Composition, 1919–1938*, p. 814. I am assuming that about 5 billions of this was federal financial aid to business, including farming.

[f] Since Kuznets' estimates of net savings by categories have not yet been carried on for the years 1939–41, I have used those of the Department of Commerce, trying to adapt them to Kuznets' own estimates of net capital formation in the way he has previously done.

Corporate net savings are Kuznets' estimates (*National Product in War Time*, Appendix

Table III 3) derived from *Survey of Current Business*, April, 1944, by adding to line 12, Table 15, p. 15, lines 4 and 5 of Table 13, p. 14.

Entrepreneurs' net savings have not been separately estimated in the *Survey*, being included with individuals' net savings. I have imputed an amount sufficient, together with corporate net savings, to take care of business net capital formation. This seems a reasonable minimum, because entrepreneurs had net savings of 2.1 billions from 1935 to 1938 (*National Income*, p. 276) and because their net income averaged about the same as in 1929 (*Survey*, April, 1944, line 13, Table 15, p. 15), when their net savings were 1.1 billions (*National Income*, p. 276). If entrepreneurial net savings were larger than this, individual net savings were smaller. Correspondingly business must then have transferred to government the excess over its own net capital formation and that would reduce the amount transferred by individuals. In either case there appears to have been no net transfer from individuals to business.

Individuals' net savings are derived by making two deductions from the Department of Commerce estimate (*Survey*, April, 1944, line 1, Table 6, p. 11). The first deduction, 6.5 billions, covers the difference between the Department's estimate of private capital consumption, 19.6 billions (*Survey*, April, 1944, line 4, Table 6, p. 11) and Kuznets' estimate, 27.1 billions (*National Product since 1869*, Table I 16), adjusted for his slightly greater estimate of gross private capital formation. The second deduction is the 3.8 billions arbitrarily assigned to entrepreneurial savings. As noted, individual and entrepreneurial savings are lumped together in the Department's estimates.

Transfer by individuals to government, 14.1 billions, accounts for the balance of individual savings after allowing 3.1 billions, Kuznets' estimate, for net residential construction. This figure also exactly agrees with the estimate of gross private savings available to the federal government (*Survey*, April, 1944, line 11, Table 6, p. 11) and with increase in public debt requiring private saving (line 18, less line 21, Table 6).

Governments' net savings are the negative residual. Net surplus of state and local governments is estimated at 1.1 billions (*Survey*, April, 1944, line 12, Table 6, p. 11). Therefore, federal net savings would be -3 billions. I assume that state and local governments received no transfers from individuals.

taken from Kuznets' estimates, while those for the last three (1939–41) have to be derived from other sources, we will divide the whole into two part periods. This has the added advantage that it indicates a trend from 1931 to 1941 which only becomes marked at the end. Finally, in order to bring our figures into balance, we now have to include what Kuznets defines as "war capital formation," however uncertain may be its lasting value.

The general trend evidenced by these figures is quite clear, even though there is a wide margin of error in some of the estimates. Individual savings averaged about 4 billions a year in the first period, only slightly less than that in the second, and appear to have risen to nearly 6 billions a year in the third. In the first period about half of these savings were invested in business; in the second period only about one-third of these savings, plus unused residential depreciation, were in-

[15] It is not possible to separate year by year, for this period, the probable transfers to business by individuals from those by government. But to indicate the gradual diminution—the trend—there follows an estimate (in billions of dollars) of these combined transfers year by year derived by deducting Kuznets' estimates of negative net capital formation in business from his estimates of negative net savings by corporations and entrepreneurs.

1931	1932	1933	1934	1935	1936	1937	1938
3.4	3.4	3.1	0.5	2.1	1.9	4.1	0.8

vested in business;[15] in the third period no individual savings were, on balance, invested in business.[16]

Government net savings averaged about 1.5 billions a year in the first period, and were negative by about 0.6 billions a year in the second and third periods. Whereas, in the first period the net savings of governments financed two-thirds of their own net capital formation, in the second and third periods all their net capital formation together with their sizable deficits were financed by the loan of individual savings.

Business net savings in the first period were better than 2 billions a year and served to finance about half the business net capital formation. In the second period all this accumulation was lost. Business paid out 26 billions (over 3 billions a year) more than it would have had to take in in order to keep its real capital intact. However, all but 8 billions of this was made good by new capital furnished by transfers of individual savings, directly or through government. In the third period business net savings sufficed for all business net capital formation, which took place at a rate (5 billion per year) greater than it did even in the first period (4.2 billions). But, as we have already suggested, these large savings in the third period were probably, as in 1915–16, largely the result of World War II before our entry into it.

These figures seem to prove that the cessation of growth in private capital formation, from 1931 on, was not due to a radical change in the quantity of individual saving. In the second and third periods, as compared with the first, there was no contraction in saving by individuals. True, in the second period, there was a very large offsetting dissaving by business, only partly made good by large saving in the third period. But it appears reasonable to regard that as a temporary phenomenon, and therefore no indication as to what to expect in the future. Finally, in the second and third periods there was a marked diversion of individual savings from business to government. Again, this might be construed as temporary. But the fact that there appear to have been *no transfers* whatever from individuals to business in the third period suggests the advisability of looking into the matter further. During the

While the three years 1935 to 1937 give the appearance of a resumption of transfers from individuals on the old scale, the facts that increased inventories account for 6.3 billions of the capital formation in those years and that "new capital" issues were but 2.6 billions for the three years suggest that a considerable portion of these transfers were temporary and took place through extensions of bank credit.

[16] This feature of the trend is also indicated by the fact that so-called "New Capital Issues of Domestic Corporations" in the form of stocks were, for the eleven years 1931 to 1941, only 10 per cent of what they had been for the eleven years 1920 to 1930. Since the combined total of stocks, bonds and notes for 1931 to 1938 was less than 6 billions, as compared with 41 billions for 1920 to 1930, and since "new capital issues" include those for the purchase of one corporation by another, it appears likely that less than half the transfer of 12.6 billions from individuals to business went to corporations.

years of deep depression, as well as in those of recovery, such transfers continued, though on a diminishing scale. The years 1939 to 1941 were years of still further recovery, and they preceded our entry into the war. Why did the transfers cease altogether at that stage? Is it possible that changes in the source of individual savings have taken place which could account for this phenomenon? Is it possible that the former outside source of new capital for business has, since 1930, gradually dried up, leaving business to grow on its own savings or not at all?

Some light may be thrown on this last and apparently crucial factor by examining the statistics of income, in general, and of income taxation, in particular. It will be recalled that we have supposed that, in the past it has been chiefly the savings of large investors—of those with "surplus" incomes—which have been the outside source for financing additional business equities. If the function of saving has shifted, for any reason, from those with large to those with small incomes, that might account for their diversion to government and for their failure to provide new capital for business.

TABLE VII

Bracket (in thousands of dollars)	1929 (in billions of dollars)	1941 (in billions of dollars)	Change (in billions of dollars)
5–10			
Reported net income	4.156	4.221	+.065
Federal income tax	.009	.406	+.397
Available	4.147	3.815	−.332
10–100			
Reported net income	6.231	6.093	−.138
Federal income tax	.335	1.720	+1.375
Available	5.896	4.373	−1.523
Over 100			
Report net income	1.907	.900	−1.007
Federal income tax	.653	.591	−.062
Available	1.254	.309	−.945

For this purpose let us first compare the years 1929 and 1941, the best year of the first period and the best year of either the second or the third period. Statistics of net income exclusive of capital gains,[17] as reported for federal income tax, give us a fairly accurate basis for comparing the aggregate net income, after taxes and available for spending

[17] See *Statistical Abstract of the United States*, 1932, and 1944–45. The deduction for capital gains is based on Table 173 (1932) for the year 1929, and on Table 287 (1944–45) for the year 1941.

or saving, for all brackets which may be regarded as coming within the definition of "surplus" incomes.

The aggregate shrinkage in income available after taxes in all these brackets was 2.800 billions. In the brackets from $5,000 to $100,000 per year, this shrinkage was almost wholly due to increased taxes—1.782 billions out of 1.855 billions. In the brackets above $100,000 a year, all (and more) of the shrinkage was due to the great contraction in the aggregate of such incomes.[18]

Coincidently, incomes under $5,000 a year were moving in the opposite direction.[19] An even greater change appears in *reported* net incomes under $5,000 a year. But of course that change is largely exaggerated by a change in the basis of reporting.

These data cannot be adduced as positive proof of any hypothesis. However, the increase in national income and in reported net income under $5,000 a year, as shown above, provide a sufficient, if not a certain, explanation of the very large aggregate of individual savings in 1941. By the end of the third period there was evidently an entirely adequate supply of individual savings for transfer to governments, whether for dissaving or for net capital formation by governments. There was also an ample supply of individual savings for residential net

[18] That this radical shinkage in income available after taxes was, at least in the higher brackets ($100,000 up), a gradual affair from 1930 to 1941 is indicated by estimates of available income after taxes calculated for incomes of specific size (not brackets). These are taken from the *26th Annual Report of the Director of Research* (Nat. Bur. of Econ. Research, 1946), Appendix, p. 33; and notes 43–48, p. 36, for basis of estimates. It will be seen that, before 1941, the marked changes downward came between 1931 and 1932 and between 1935 and 1936. In the last column appears an approximate estimate for 1945, under the then effective Revenue Act. This is inserted only to indicate how little may be expected in the way of savings from "surplus" incomes in the immediate future.

NET INCOME
(in thousands of dollars)

Before Federal Income Taxes	After Federal Income Taxes				
	1930–31	1932–33	1934–35	1936–39	1945 (approximate)
5.00	4.992	4.932	4.952	4.952	3.955
10.00	9.917	9.584	9.657	9.657	7.492
25.00	24.01	22.54	22.67	22.67	15.36
100.00	84.26	69.96	69.84	68.00	36.05
500.00	384.3	236.5	236.5	196.4	91.67
1,000.00	759.3	429.0	429.1	321.6	183.3

[19] If we deduct reported net incomes over $5,000 a year from total national income, we get about 71 billions for 1929, and about 85 billions for 1941.

TABLE VIII

	1929 (in billions of dollars)	1941 (in billions of dollars)	Change (in billions of dollars)
Total national income	83.326	96.857	+13.531
Incomes under $5,000 per year			
Reported net income	12.213	58.868	+46.655
Federal income tax	.005	1.189	+1.184
Available	12.208	57.679	+45.471
Incomes over $5,000 per year			
Reported net income	12.294	11.214	−1.080
Federal income tax	.997	2.717	+1.720
Available	11.297	8.497	−2.800

capital formation. On the other hand, the decrease in incomes over $5,000 a year and the far greater decrease in the portion of them available for expenditure and saving at least suggest that new capital for business was no longer available from the old source.[20]

III

There can be no question that the private economy of the United States stood still from 1931 to 1945, and that for the first time, at least in recent history.[21] In fact, we have been to some extent living on our fat. Such is the essence of the foregoing analysis. There can also be no question that the private economy will continue to stand still unless the process of its own net capital formation is resumed. To what extent is that possible under present conditions? As to that, our examination yields us a fair basis for prediction.

The first requisite is *future* real saving. It must not be supposed that any of the present so-called surplus liquid resources of the people—individual or business—can be used for future net capital formation without future real saving. These surplus liquid resources were acquired during the war. They represent federal government debt or consist of cash—currency and deposits—which in turn represents government debt in the Federal Reserve or commercial banks. The proceeds of this

[20] The reduction of 2.8 billions of dollars in income "available" for saving and expenditure far exceeds the average transfer from individuals to business in the years 1919 to 1930.

[21] In the years 1926 to 1929 the United States accounted for 42.2 per cent of the world's manufacturing production. In the years 1936 to 1938 this percentage had fallen to 32.2 per cent, a lower figure than any since 1900. In 1938 the only other industrialized countries whose index of manufacturing production (on a 1925-29 base) showed a reduction were France, Belgium, Czechoslovakia and Switzerland. See *Industrialization and Foreign Trade* (League of Nations Pub., 1945), pp. 13 and 140–43.

federal government borrowing have been spent, not invested. There is nothing back of the debt except the future tax liability of the people. Having used their surplus income to finance the war, the people cannot now use it over again for some other purpose. Most of the savings of the war years have been written off the books so far as the community as a whole is concerned.

In the private economy under present conditions the sources of voluntary new real savings will be practically limited to corporations, to small entrepreneurs, and to small individual savers. At present tax rates[22] large entrepreneurs and individuals with large incomes are practically precluded from saving. There is no reason to suppose that, in good years, the aggregate volume of savings from the remaining sources will not be ample. The impediments to the resumption of the former rate and direction of economic growth will arise from the probable canalization of these savings rather than from their deficiency.

Existing successful corporations will be able to continue to grow at a modest rate—increasing their net real capital—if they are permitted to retain their undistributed profits. Occasionally they may be able to draw on the savings of small savers through bond issues sold to the savings institutions. Under present conditions new equity capital is not likely to be available. Existing corporations will also be able to effect net capital formation out of their present liquid resources—their past savings—to the extent that they can dispose of their surplus cash and government securities in exchange for the new savings of small savers.[23] In this way they can, for the time being, draw on this large source of future savings without any change of habit among small savers. However, this possibility is limited. Once the present surplus liquid resources are used up, that process will come to an end.

Small entrepreneurs can grow and produce net capital formation out of their own net savings. However, this process can only continue so long as they remain very small. Under present conditions as soon as their income rises above a few thousand a year, federal income taxes will take most of their potential savings.

The savings of small savers should be adequate and available to finance sufficient housing to make up the very apparent deficit in that field. Both directly and through institutions, this has always been one of the chief channels for the investment of small savings. Past experience would lead one to expect that the rest of these savings would be used,

[22] See p. 26, note 17, above, for rough estimates of amounts *now* available for expenses and savings from certain sample "surplus" incomes.

[23] Any attempt to use liquid resources for new capital formation that does not correspond to such new real saving will result either in offsetting dissaving elsewhere or in a mere rise of prices without real capital formation at uniform prices.

for the time being, in a gradual taking over of the cash and government securities now held by business as surplus liquid resources; perhaps for an increasing taking over, through refunding operations, of government securities now held in banks, with a consequent reduction of the present excessive volume of currency and demand deposits,[24] and perhaps thereafter for new loans to governments for public non-war net capital formation.

So far as the business sector of the economy is concerned, the prospect is obvious. If the small saver can be induced to take over the surplus liquid resources of existing business, much of the shortage in net capital formation accumulated during the past fifteen years can be made good in a few years.[25] Thereafter, successful corporations and very small

[24] The subject of reduction of federal indebtedness to the banking system—Federal Reserve and commercial—is, in this connection, a complicated one, for it involves the somewhat independent question whether the resulting quantity of circulating medium—currency and demand deposits—is too large for economic health and should therefore be reduced, *pari passu*. At least at some point in the reduction of this floating debt it is probable that reduction of circulating medium should cease.

(*a*) If the floating debt is redeemed out of involuntary savings—tax and other revenues—and the banks' reserves are reduced proportionately, no real saving nor net capital formation can result.

(*b*) If the floating debt is redeemed out of involuntary savings, leaving the banks' reserves merely freed for new extensions of credit, real saving and net capital formation can result to the extent that the new currency and demand deposits ultimately become the medium in which other new savings are invested.

(*c*) If the floating debt is refunded out of voluntary savings—presumably small individual savings—and the banks' reserves are reduced proportionately, no real saving nor net capital formation can result.

(*d*) If the floating debt is refunded out of voluntary savings and the banks' reserves are merely freed for new extensions of credit, real saving and net capital formation can result to the extent that the new currency and demand deposits ultimately become the medium in which other new savings are invested.

Thus, under *a* and *c*, so long as the objective is joint reduction of both the floating debt and the circulating medium, no real capital formation can result. The apparent savings, involuntary or voluntary, disappear in the course of writing off government debt, which is, for the economy as a whole, a fictitious asset.

Under *b* and *d*, when the objective is only the reduction of the floating debt, new credit replacing what is retired may lead to net capital formation if it corresponds to new saving invested in the new currency or deposits.

All of which is equivalent to saying that money savings applied to the contraction of the credit structure cannot become real savings unless they are then utilized for a re-expansion of the credit structure by being lent out again.

In none of the four cases can the saving, involuntary or voluntary, which goes to reduce the floating debt itself result in net capital formation. It is all absorbed, whether by redemption or refunding, in writing off or in changing the ownership of a fictitious asset. But, under *b* and *d*, the new credit may induce new saving by producing capital formation and an increase in income. If it does not induce new saving, the capital formation is not net, *i.e.*, because there is dissaving and capital consumption to cancel the new capital formation.

[25] Daniel W. Bell, former Under Secretary of the Treasury, estimated, as of June 30, 1945, that "other" (business) corporations and associations held 27 billions of additional government securities and 16 billions of additional demand deposits and that "business accounts of

entrepreneurs can continue to grow, at least slowly. But there is likely to be little organization of new business concerns; growing corporations will find it difficult to procure additional outside capital; and all entrepreneurs larger than the smallest will be practically stopped. We can therefore expect a progressive concentration of business in a relatively few large corporations; and after the present surplus liquid resources are used up a much slower rate of growth than in the past. Since business is wholly responsible for the flow of goods to consumers, we can also expect a much slower rate of improvement in the standard of living than in the past, so far as that requires net capital formation.

All this forecast is predicated on a continuance of present conditions. But there are four major ways in which conditions might change. Any or all of them might be sufficient to lead to a resumption in the growth of business and in the standard of living at a rate such as characterized our first period, 1919 to 1930.

1. After a time we may commence the process of involuntary saving. When the proceeds of taxes paid out of income or of other net governmental revenues are used for the redemption of public debt outside of banks, the effect is to release these proceeds for reinvestment. If invested in real capital formation, the result is new, though compulsory, real saving. To the taxpayer this process appears as expense; to the government bondholder it appears as merely the conversion of some of his principal from government securities to cash. To the extent that these bondholders are persons accustomed to investing in business equities, in new or old concerns, new capital might thus become available for business. That is, it might become so, if the incentive to risk-taking among such persons remains sufficient after taxes on income and on capital gains.

2. The income tax structure might be changed. In the face of the huge federal budget and the huge federal debt this seems but a slim prospect. Nevertheless, sentiment in regard to the practically confiscatory rates —say over 50 per cent—may change. It is likely that any reduction in taxes in these brackets would all go into increased savings. Since such a limitation on tax rates would leave half the income derived as an inducement to risk-taking, that might lead to investment in new equity capital issues. On the basis of the 1941 distribution of incomes the reduction in taxes from present rates would be small, of the order of 350 millions. Therefore, at first, the additional savings would be small. But, if the discontinuance of confiscatory rates resulted, in time, in a new crop of

individuals" held 10 billions of additional deposits, as a result of fiscal operations during the previous five years. This suggests a total of surplus liquid resources in business hands of about 50 billions. See "Address before Association of Stock Exchange Firms," quoted in *New York Times*, Nov. 25, 1945.

large incomes, additional savings might be substantial—500 to 1,000 millions. In the latter event, if large incomes grew again to the 1929 level, the lower rates would nevertheless yield a larger total tax. However, the current social attitude toward "concentrated wealth" might regard such a change in conditions as no better than the concentration of business in a relatively few large corporations, which this change would be designed to cure.

3. The savings of small savers might be diverted from their customary channels and invested in new equity capital for business through the intervention of government. This could be done indirectly, if the government offered the small saver, or his savings institutions, government securities—a normal investment for both—and then invested the proceeds in equity capital for business. Or, this could be done directly by small savers and their savings institutions, the government merely guaranteeing or insuring securities issued by corporations and, perhaps, sleeping interests in partnerships and associations. The indirect method seems to resemble part of the capital-control measures proposed for the new British régime. Under either method the government would assume all risk. Under the first method the government would receive all profits and suffer all losses. Under the second, the small savers would receive all profits and the government would suffer all losses.[26] Under the first method, the net losses, if any, and, under the second, all losses would ultimately fall upon the taxpayer and be distributed in the same manner that marginal taxes were distributed. To many, the objectionable feature of any change of condition in this direction would be that it would appear as a move along the road toward state capitalism.

4. The only other change of condition which could modify the forecast involves a radical alteration in previous practice. But, more than any of the others, it also leads in the direction of an ideal Jeffersonian economic democracy. Through a program of re-education and adaptation of financial machinery it might be possible to induce the small saver to undertake the function of risk-taking. Stockholding by employees in their employer's enterprise has been tried. It faces many difficulties, and particularly so in a time of high turnover of labor. Moreover, experienced investors have found diversification essential; that would probably be even more essential for inexperienced investors. Investment trusts and, for larger individual funds, investment counsel might prove adequate channels. However, here, past tendencies would be likely to repeat themselves. The assumption of the responsibility of investing the savings of small savers has always, in time, become more and more hedged round by self-imposed and legally-imposed safeguards and limi-

[26] Except for premiums on the insurance, if any.

tations. How long, as agencies for small savers, would investment trusts continue to take risks? Finally, experienced investors know they cannot always win, while inexperienced investors expect always to do so. If they do not, they must find a scapegoat. However, even recognizing the various difficulties, the vision of a nation of small capitalists remains a very inviting one.

Risk-taking is an indispensable function in any form of economy. We have, for the time being, practically destroyed our system for extending it on any large scale. One might say that risk-taking on a large scale is now considered socially beneficial if you lose and socially harmful if you win. Society says, in effect, "Heads, I win; tails, you lose." If that attitude continues, a new system for new risk-taking on a large scale will have to be developed. Until a new system is developed or the old one restored, our prediction must be based on present conditions, and must be as stated above. After a short burst of apparent rejuvenation, we will arrive at a state of slow growth, increasing concentration and limited innovation in the business economy, and consequently a state of slight improvement in the standard of living. It is true that, then, our financial casualties may be reduced. For casualties are always heavy in an economy of enterprise. But only along that road lies progress.

EXPANSION AND EMPLOYMENT[1]

By Evsey D. Domar*

"A slow sort of a country," said the Queen. "Now, *here*, you see, it takes all the running *you* can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that."

Lewis Carroll: *Through the Looking Glass*

In these days of labor shortages and inflation, a paper dealing with conditions needed for full employment and with the threat of deflation may well appear out of place. Its publication at this time is due partly to a two-year lag between the first draft and the final copy; also to the widely held belief that the present inflation is a temporary phenomenon, and that once it is over, the old problem of deflation and unemployment may possibly appear before us again.

* * * *

Our comfortable belief in the efficacy of Say's Law has been badly shaken in the last fifteen years. Both events and discussions have shown that supply does not automatically create its own demand. A part of income generated by the productive process may not be returned to it; this part may be saved and hoarded. As Keynes put it, "Unemployment develops . . . because people want the moon; men cannot be employed when the object of desire (*i.e.*, money) is something which cannot be produced. . . . "[2] The core of the problem then is the public's desire to hoard. If no hoarding takes place, employment can presumably be maintained.

This sounds perfectly straight and simple; and yet it leaves something unexplained. Granted that absence of hoarding is a *necessary* condition for the maintenance of full employment, is it also a *sufficient* condition? Is the absence of hoarding *all* that is necessary for the avoidance of unemployment? This is the impression *The General Theory* gives. And yet, on a different plane, we have some notions about an increasing productive capacity which must somehow be utilized if unemployment

* The author is assistant professor of economics at the Carnegie Institute of Technology.

[1] This paper forms a sequence to my earlier article on "The 'Burden' of the Debt and the National Income," published in this *Review*, Vol. XXXIV, No. 5 (Dec., 1944), pp. 798–827. Though their titles seem different, the two papers are based on the same logical foundation and treat a common subject: the economic rôle of growth.

[2] John M. Keynes, *The General Theory of Employment Interest and Money* (New York, 1936), p. 235.

is to be avoided. Will a mere absence of hoarding assure such a utilization? Will not a continuous increase in expenditures (and possibly in the money supply) be necessary in order to achieve this goal?

The present paper deals with this problem. It attempts to find the conditions needed for the maintenance of full employment over a period of time, or more exactly, *the rate of growth of national income* which the maintenance of full employment requires. This rate of growth is analyzed in Section I. Section II is essentially a digression on some conceptual questions and alternative approaches. It may be omitted by the busy reader. Section III is concerned with the *dual* character of the investment process; that is, with the fact that investment not only generates income but also increases productive capacity. Therefore the effects of investment on employment are less certain and more complex than is usually supposed. In Section IV a few examples from existing literature on the subject are given, and Section V contains some concluding remarks. The most essential parts of the paper are presented in Sections I and III.

As in many papers of this kind, a number of simplifying assumptions are made. Most of them will become apparent during the discussion. Two may be noted at the outset. First, events take place simultaneously, without any lags. Second, income, investment and saving are defined in the *net* sense, *i.e.*, over and above depreciation. The latter is understood to refer to the cost of replacement of the depreciated asset by another one of *equal* productive capacity. These assumptions are not entirely essential to the argument. The discussion could be carried out with lags, and, if desired, in gross terms or with a different concept of depreciation. Some suggestions along these lines are made in Section II. But it is better to begin with as simple a statement of the problem as possible, bearing in mind of course the nature of assumptions made.

I. The Rate of Growth

It is perfectly clear that the requirement that income paid out should be returned to the productive process, or that savings be equal to investment, or other expressions of the same idea, are simply formulas for the retention of the income *status quo*. If underemployment was present yesterday, it would still remain here today. If yesterday's income was at a full employment level, that *income level* would be retained today. It may no longer, however, correspond to full employment.

Let yesterday's full employment income equal an annual rate of 150 billion dollars, and let the average propensity to save equal, say, 10 per cent. If now 15 billions are annually invested, one might expect full employment to be maintained. But during this process, capital equipment of the economy will have increased by an annual rate of 15 billions

—for after all, investment *is* the formation of capital.[3] Therefore, the productive capacity of the economy has also increased.

The effects of this increase on employment will depend on whether or not *real income* has also increased. Since money income has remained, as assumed, at the 150 billion annual level, an increase in real income can be brought about only by a corresponding fall in the general price level. This indeed has been the traditional approach to problems of this kind, an approach which we shall have to reject here for the following reasons:

1. The presence of considerable monopolistic elements (in industry and labor) in our economy makes unrealistic the assumption that a falling *general* price level could be achieved without interfering with full employment. This of course does not exclude *relative* changes among prices. As a matter of fact, if industries subject to a faster-than-average technological progress do not reduce their prices to some extent, a constant general price level cannot be maintained.

2. For an economy saddled with a large public debt and potentially faced (in peacetime) with serious employment problems, a falling price level is in itself undesirable.

3. A falling price level can bring about a larger real income only in the special case when prices of consumers' goods fall more rapidly than those of investment goods. For otherwise (with a constant propensity to save) money income will be falling as fast or faster than the price level, and real income will be falling as well. To prevent money income from falling so rapidly, the volume of real investment would have to keep rising—a conclusion which will be presently reached in the more general case.

4. Finally, the assumption of a falling general price level would obscure—and I believe quite unnecessarily—the main subject we are concerned with here.

For these reasons, a *constant general price level* is assumed throughout this paper. But, from a theoretical point of view, this is a convenience rather than a necessity. The discussion could be carried on with a falling or a rising price level as well.

To come back to the increase in capacity. If both money and real national income thus remain fixed at the 150 billion annual level, the creation of the new capital equipment will have one or more of the

[3] The identification of investment with capital formation is reasonably safe in a private economy where only a small part of resources is disposed of by the government. When this part becomes substantial, complications arise. This question will be taken up again in Section II. Meanwhile, we shall disregard it and divide total national income, irrespective of source, into investment (*i.e.*, capital formation) and consumption.

The term "national income" is understood here in a broad sense, as total output minus depreciation, and does not touch on current controversies regarding the inclusion or exclusion of certain items. Perhaps "net national product" would be more appropriate for our purposes.

following effects: (1) The new capital remains unused; (2) The new capital is used at the expense of previously constructed capital, whose labor and/or markets the new capital has taken away; (3) The new capital is substituted for labor (and possibly for other factors).

The first case represents a waste of resources. That capital need not have been constructed in the first place. The second case—the substitution of new capital for existing capital (before the latter is worn out, since investment is defined here in the net sense)—takes place all the time and, in reasonable magnitudes, is both unavoidable and desirable in a free dynamic society. It is when this substitution proceeds on a rather large scale that it can become socially wasteful; also, losses sustained or expected by capital owners will make them oppose new investment—a serious danger for an economy with considerable monopolistic elements.

Finally, capital may be substituted for labor. If this substitution results in a *voluntary* reduction in the labor force or in the length of the work week, no objections can be raised. Such a process has of course been going on for many years. But in our economy it is very likely that at least a part of this substitution—if carried on at an extensive scale—will be involuntary, so that the result will be unemployment.

The tools used in this paper do not allow us to distinguish between these three effects of capital formation, though, as will appear later, our concepts are so defined that a voluntary reduction in the number of man-hours worked is excluded. In general, it is not unreasonable to assume that in most cases all three effects will be present (though not in constant proportions), and that capital formation not accompanied by an increase in income will result in unemployed capital and labor.

The above problems do not arise in the standard Keynesian system because of its explicit assumption that employment is a function of national income, an assumption which admittedly can be justified only over short periods of time. Clearly, a full employment income of 1941 would cause considerable unemployment today. While Keynes' approach—the treatment of employment as a function of income—is a reasonable first approximation, we shall go a step further and assume instead that *the percentage of labor force employed is a function of the ratio between national income and productive capacity*. This should be an improvement, but we must admit the difficulties of determining productive capacity, both conceptually and statistically. These are obvious and need not be elaborated. We shall mean by productive capacity the total output of the economy at what is usually called full employment (with due allowance for frictional and seasonal unemployment), such factors as consumers' preferences, price and wage structures, intensity of competition, and so on being given.

The answer to the problem of unemployment lies of course in a growing income. If after capital equipment has increased by (an annual rate of) 15 billions an income of 150 billions leaves some capacity unused, then a higher magnitude of income can be found—say 155 or 160 billions—which will do the job. There is nothing novel or startling about this conclusion. The idea that a capitalist economy needs growth goes back, in one form or another, at least to Marx. The trouble really is that the idea of growth is so widely accepted that people rarely bother about it. It is always treated as an afterthought, to be added to one's speech or article if requested, but very seldom incorporated in its body. Even then it is regarded as a function of some abstract technological progress which somehow results in increasing productivity per man-hour, and which takes place quite independently of capital formation. And yet, our help in the industrialization of undeveloped countries will take the form not only of supplying technical advice and textbooks, but also of actual machinery and goods. Certainly the 80 odd billion dollars of net capital formation created in the United States in the period 1919–29 had a considerable effect on our productive capacity.[4]

A change in productive capacity of a country is a function of changes in its natural resources (discovery of new ones or depletion of others), in its labor force (more correctly, man-hours available), capital and the state of technique.[5] Since changes in natural resources and technique are very difficult concepts, we can express changes in total capacity via changes in the quantity and productivity of labor or of capital. The traditional approach builds around labor. The several studies of the magnitude of total output corresponding to full employment, made in the last few years, consisted in multiplying the expected labor force (subdivided into several classes) by its expected average productivity.[6] This procedure did not imply that the other three factors (natural resources, technology and capital) remained constant; rather that their variations were all reflected in the changes in productivity of labor.

It is also possible to put capital in the center of the stage and to estimate variations in total capacity by measuring the changes in the quantity of capital and in its productivity, the latter reflecting changes currently taking place in natural resources, technology and the labor force. From a practical point of view, the labor approach has obvious advantages, at least in some problems, because labor is a more homogeneous and easily measurable factor. But from a theoretical point of

[4] This figure, in 1929 prices, is taken from Simon Kuznets, *National Income and Its Composition*, Vol. I (New York, 1941), p. 268. The actual figure was 79.1 billion dollars.

[5] Taking other conditions listed on p. 37 as given.

[6] See for instance E. E. Hagen and N. B. Kirkpatrick, "The National Output at Full Employment in 1950," *Amer. Econ. Rev.*, Vol. XXXIV, No. 4 (Sept., 1944), pp. 472–500.

view, the capital approach is more promising and for this reason: the appearance of an extra workman or his decision to work longer hours *only* increases productive capacity without, however, generating any income to make use of this increase. But the construction of a new factory has a *dual* effect: *it increases productive capacity and it generates income.*

The emphasis on this dual character of the investment process is the essence of this paper's approach to the problem of employment. If investment increases productive capacity and also creates income, what should be the magnitude of investment, or at what rate should it grow, in order to make the increase in income equal to that of productive capacity?[7] Couldn't an equation be set up one side of which would represent the increase (or the rate of increase) of productive capacity, and the other—that of income, and the solution of which would yield the required *rate of growth?*

We shall attempt to set up such an equation. It will be first expressed in symbolic form, and later (on p. 41) illustrated by a numerical example.

Let investment proceed at an annual rate of I, and let annual productive capacity (net value added) per dollar of newly created capital be equal on the average to s. Thus if it requires, say, 3 dollars of capital to produce (in terms of annual net value added) one dollar of output, s will equal one-third or 33.3 per cent per year. It is not meant that s is the same in all firms or industries. It depends of course on the nature of capital constructed and on many other factors. Its treatment here as a given magnitude is a simplification which can be readily dispensed with.

The productive capacity of I dollars invested will thus be Is dollars per year. But it is possible that the operation of new capital will take place, at least to some extent, at the expense of previously constructed plants, with which the new capital will compete both for markets and for factors of production (mainly labor). If as a result, the output of existing plants must be curtailed, it would be useless to assert that the productive capacity of the *whole economy* has increased by Is dollars per year.[8] It has actually increased by a smaller amount which will be indicated by $I\sigma$.[9] σ may be called the *potential social average productivity of investment*. Such a long name calls for an explanation.

1. As stated above, σ is concerned with the increase in productive

[7] This statement of the problem presupposes that full employment has already been reached and must only be maintained. With a small extra effort we could begin with a situation where some unemployment originally existed.

[8] These comparisons must of course be made at a full employment level of national income. See also pp. 44–46.

[9] We are disregarding here external economies obtained by existing plants from the newly constructed ones.

capacity of the whole society and not with the productive capacity per dollar invested in the new plants taken by themselves, that is with s. A difference between s and σ indicates a certain misdirection of investment, or—more important—that investment proceeds at too rapid a rate as compared with the growth of labor and technological progress. This question will be taken up again in Section II.

2. σ should not be confused with other related concepts, such as the traditional marginal productivity of capital. These concepts are usually based on a *caeteris paribus* assumption regarding the quantity of other factors and the state of technique. It should be emphasized that the use of σ does not imply in the least that labor, natural resources and technology remain fixed. It would be more correct therefore to say that σ indicates the increase in productive capacity which *accompanies* rather than which is caused by each dollar invested.

3. For our purposes, the most important property of σ is its *potential character*. It deals not with an increase in national income but with that of the *productive potential* of the economy. A high σ indicates that the economy *is capable* of increasing its output relatively fast. But whether this increased capacity will actually result in greater output or greater unemployment, depends on the behavior of money income.

The expression $I\sigma$ is the supply side of our system; it is the increase in output which the economy *can* produce. On the demand side we have the multiplier theory, too familiar to need any elaboration, except for the emphasis on the obvious but often forgotten fact that, with any given marginal propensity to save, to be indicated by α, an increase in national income is not a function of investment, but of the *increment* in investment. If investment today, however large, is equal to that of yesterday, national income of today will be just equal and not any larger than that of yesterday. All this is obvious, and is stressed here to underline the lack of symmetry between the effects of investment on productive capacity and on national income.

Let investment increase at an absolute annual rate of ΔI (*e.g.*, by two billion per year), and let the corresponding absolute annual increase in income be indicated by ΔY. We have then

$$\Delta Y = \Delta I \frac{1}{\alpha}, \tag{1}$$

where $\frac{1}{\alpha}$ is of course the multiplier.

Let us now assume that the economy is in a position of a full employment equilibrium, so that its national income equals its productive capacity.[10] To retain this position, income and capacity should increase

[10] See note 7.

at the same rate. The annual increase in potential capacity equals $I\sigma$. The annual increase in actual income is expressed by $\Delta I(1/\alpha)$. Our objective is to make them equal. This gives us the fundamental equation

$$\Delta I \frac{1}{\alpha} = I\sigma. \tag{2}$$

To solve this equation, we multiply both sides by α and divide by I, obtaining

$$\frac{\Delta I}{I} = \alpha\sigma. \tag{3}$$

The left side of expression (3) is the absolute annual increase (or the absolute rate of growth) in investment—ΔI—divided by the volume of investment itself; or in other words, it is the relative increase in investment, or the annual percentage rate of growth of investment. Thus the maintenance of full employment requires that investment grow at the annual percentage rate $\alpha\sigma$.

So much for investment. Since the marginal propensity to save—α—is assumed to be constant, an increase in income is a constant multiple of an increase in investment (see expression [1]). But in order to remain such a constant multiple of investment, income must also grow at the same annual percentage rate, that is at $\alpha\sigma$.

To summarize, the maintenance of a continuous state of full employment requires that *investment and income grow at a constant annual percentage (or compound interest) rate* equal to the product of the marginal propensity to save and the average (to put it briefly) productivity of investment.[11]

This result can be made clearer by a numerical example. Let $\sigma = 25$ per cent per year, $\alpha = 12$ per cent, and $Y = 150$ billions per year. If full employment is to be maintained, an amount equal to $150 \times \frac{12}{100}$ should be invested. This will raise productive capacity by the amount invested times σ, *i.e.*, by $150 \times \frac{12}{100} \times \frac{25}{100}$, and national income will have to rise by the same annual amount. But the relative rise in income will equal the absolute increase divided by the income itself, *i.e.*,

[11] The careful reader may be disturbed by the lack of clear distinction between increments and rates of growth here and elsewhere in the text. If some confusion exists, it is due to my attempt to express these concepts in non-mathematical form. Actually they all should be stated in terms of rates of growth (derivatives in respect to time). For a more serious treatment of this point, as well as for a more complete statement of the logic of the paper, see my article "Capital Expansion, Rate of Growth, and Employment," *Econometrica*, Vol. XIV (Apr., 1946), pp. 137–47.

$$(4)\qquad \frac{150 \times \frac{12}{100} \times \frac{25}{100}}{150} = \frac{12}{100} \times \frac{25}{100} = \alpha\sigma = 3 \text{ per cent.}$$

These results were obtained on the assumption that α, the marginal propensity to save, and σ, the average productivity of investment, remain constant. The reader can see that this assumption is not necessary for the argument, and that the whole problem can be easily reworked with variable α and σ. Some remarks about a changing α are made on pp. 48–49.

The expression (3) indicates (in a very simplified manner) conditions needed for the maintenance of full employment over a period of time. It shows that it is not sufficient, in Keynesian terms, that savings of yesterday be invested today, or, as it is often expressed, that investment offset saving. Investment of today must always exceed savings of yesterday. A mere absence of hoarding will not do. An injection of new money (or dishoarding) must take place every day. Moreover, this injection must proceed, in absolute terms, at an accelerated rate. The economy must continuously expand.[11a]

II. *The Argument Re-examined*

The busy reader is urged to skip this section and proceed directly to Section III. The present section is really a long footnote which re-examines the concepts and suggests some alternative approaches. Its purpose is, on the one hand, to indicate the essential limitations of the preceding discussion, and on the other, to offer a few suggestions which may be of interest to others working in this field.

It was established in Section I that the maintenance of full employment requires income and investment to grow at an annual compound interest rate equal to $\alpha\sigma$. The meaning of this result will naturally depend on those of α and σ. Unfortunately neither of them is devoid of ambiguity.

The marginal propensity to save—α—is a relatively simple concept in a private economy where only a small part of resources is handled by the government. National income can be divided, without too much trouble, into investment and consumption, even though it is true that the basis for this distinction is often purely formal.[12] But on the whole it

[11a] After this paper was sent to the printer, I happened to stumble on an article by R. F. Harrod, published in 1939, which contained a number of ideas similar to those presented here. See "An Essay in Dynamic Theory," *Econ. Jour.*, Vol. XLIX (Apr., 1939), pp. 14–33.

[12] Thanks are due to George Jaszi for his persistent efforts to enlighten me on this subject. The division of national income into investment and consumption is really a more difficult task than my text might imply.

sounds quite reasonable to say that if marginal propensity to save is α, then an α fraction of an increase in income is saved by the public and invested in income-producing assets.

When a substantial part of the economy's resources is disposed of by the government, two interpretations of the marginal propensity to save, or of savings and investment in general, appear possible. The first is to continue dividing the total output, whether produced by government or by private business, into consumption and investment. This method was implicitly followed in this paper. But a question arises regarding the meaning and stability of α. It makes sense to say that a person or the public save, in accordance with the size of their incomes, their habits, expectations, etc., a certain, though not necessarily constant, fraction of an increment in their *disposable* (*i.e.*, after income and social security taxes) income, but can a similar statement be made regarding total national income, a good part of which is not placed at the disposal of the public? Also it is not easy to divide government expenditures into consumption and investment.

The other method would limit α to disposable income only, and then provide for government expenditures separately. It would be necessary then to find out the effects of these expenditures on productive capacity.

Depreciation raises another problem. Since all terms are defined here in the net sense, the meaning and magnitude of α will also depend on those of depreciation, irrespective of the choice between the above two methods. Depreciation has been defined here (see page 35) as the cost of replacement of a worn out asset by another one with an equal productive capacity. While this approach is about as bad or as good as any other, the difficulty still remains that businesses ordinarily do not use this definition, and therefore arrive at a different estimate of their net incomes, which in turn determine their propensity to save.

I do not have ready answers to these questions, though I do not consider them insurmountable. I am mentioning them here partly in order to indicate the limitations of the present argument, and also as obstacles which will have to be overcome if a more exact analysis is undertaken.

σ is even more apt to give rise to ambiguities. s, from which it springs, has been used, in one form or another, in economic literature before, particularly in connection with the acceleration principle.[13] Here it indicates the annual amount of income (net value added) which can be produced by a dollar of newly created capital. It varies of course among firms and industries, and also in space and time, though a study recently

[13] See for instance Paul A. Samuelson, "Interactions between the Multiplier Analysis and the Principle of Acceleration," *Rev. Econ. Stat.*, Vol. XXI (May, 1939), pp. 75–79; also R. F. Harrod, *The Trade Cycle* (Oxford, 1936). These authors, however, used not the ratio of income to capital, but of consumption to capital, or rather the reciprocal of this ratio.

made seems to indicate that it has been quite stable, at least in the United States and Great Britain, over the last 70 years or so.[14] Whether s has or has not been relatively stable is not essential for our discussion. The real question is whether such a concept has meaning, whether it makes sense to say that a given economy or a plant has a certain capacity. Traditional economic thinking would, I fear, be against such an approach. Unfortunately, it is impossible to discuss this question here. I believe that our actual experience during the last depression and this war, as well as a number of empirical studies, show that productive capacity, both of a plant and of the whole economy is a meaningful concept, though this capacity, as well as the magnitude of s, should be treated as a *range* rather than as a single number.

In some problems s may be interpreted as the minimum annual output per dollar invested which will make the investment worth undertaking. If this output falls below s, the investor suffers a loss or at least a disappointment, and may be unwilling to replace the asset after it has depreciated.

All these doubts apply to σ even more than to s. As explained on pages 39–40, σ differs from s by indicating the annual increment in capacity of the *whole economy* per dollar invested, rather than that of the newly created capital taken by itself. The possible difference between s and σ is due to the following reasons:

1. The new plants are not operated to capacity because they are unable to find a market for their products.

2. Old plants reduce their output because their markets are captured by new plants.

As productive capacity has no meaning except in relation to consumers' preferences, in both of the above cases productive capacity of the country is increased by a smaller amount than could be produced by the new plants; in the limiting case it is not increased at all, and $\sigma = 0$, however high s may be. But it must be made clear that the test of whether or not σ is below s can be made only under conditions (actual or assumed) of full employment. If markets are not large enough because of insufficiency of effective demand due to unemployment, it cannot yet be concluded that σ is below s.

3. The first two cases can take place irrespective of the volume of current investment. A more important case arises when investment proceeds at such a rapid rate that a shortage of other factors relative to capital develops. New plants may be unable to get enough labor, or more likely, labor (and other factors) is transferred to new plants from previously constructed ones, whose capacity therefore declines. In its

[14] See Ernest H. Stern, "Capital Requirements in Progressive Economies," *Economica*, n.s. Vol. XII (Aug., 1945), pp. 163–71.

actual manifestation, case 3 can hardly be separated from cases 1 and 2, because to the individual firm affected the difference between s and σ always takes the form of a cost-price disparity. The reason why we are trying to separate the first two cases from the third lies in the bearing of this distinction on practical policy. The first two cases arise from an error of judgment on the part of investors (past or present) which is, at least to some extent, unavoidable and not undesirable. The struggle for markets and the replacement of weaker (or older) firms and industries by stronger (or newer) ones is the essence of progress in a capitalist society. The third case, on the other hand, may result from poor fiscal policy. It constitutes an attempt to invest too much, to build more capital than the economy can utilize even at full employment. Such a situation can develop if an economy with a high propensity to save tries to maintain full employment by investing all its savings into capital goods. But it should be made clear that the expressions "too much capital" or "high propensity to save" are used in a relative sense—in comparison with the growth of other factors, that is natural resources, labor and technology.

The use of σ certainly does not imply that these factors remain fixed. As a matter of fact, it would be very interesting to explore the use of a more complex function as the right side of expression (2) instead of $I\sigma$, a function in which the growth of labor, natural resources, and technology would be presented explicitly, rather than through their effects on σ.[15] I did not attempt it because I wished to express the idea of growth in the simplest possible manner. One must also remember that in the application of mathematics to economic problems, diminishing returns appear rapidly, and that the construction of complex models requires so many specific assumptions as to narrow down their applicability.

And yet it may be interesting to depart in another direction, namely to introduce lags. In this paper both the multiplier effect and the increase in capacity are supposed to take place simultaneously and without any lag. Actually, the multiplier may take some time to work itself out, and certainly the construction of a capital asset takes time. In a secular problem these lags are not likely to be of great importance, but they may play an essential rôle over the cycle. We shall return to this question on pages 50–51.

Finally, it is possible to approach the problem of growth from a different point of view. It was established here that the rate of growth required for a full employment equilibrium to be indicated by r is equal to

[15] Some work along these lines has been done by J. Tinbergen. See his "Zur Theorie der langfristigen Wirtschaftsentwicklung" in the *Weltwirtschaftliches Archiv*, Vol. LV (May, 1942), pp. 511–49.

$$r = \alpha\sigma, \tag{5}$$

so that if α and σ are given, the rate of growth is determined. But the equation (5) can also be solved for α in terms of r and σ, and for σ in terms of r and α. Thus if it is believed that r should be treated as given (for instance by technological progress), and if it is also decided to keep σ at a certain level, perhaps not too far from s, then it is possible to determine $\alpha = r/\sigma$, as being that marginal propensity to save which can be maintained without causing either inflation or unemployment. This approach was actually used by Ernest Stern in his statistical study of capital requirements of the United Kingdom, the United States and the Union of South Africa.[16] I also understand from Tibor de Scitovszky that he used the same approach in a study not yet published.

It is also possible to treat r and α as given and then determine what $\sigma = r/\alpha$ would have to be. Each approach has its own advantages and the choice depends of course on the nature of the problem in hand. The essential point to be noticed is the relationship between these three variables r, α, and σ, and the fact that if any two of them are given, the value of the third needed for the maintenance of full employment is determined; and if its actual value differs from the required one, inflation in some cases and unused capacity and unemployment in others will develop.

III. *The Dual Nature of the Investment Process*

We shall continue the discussion of growth by returning to expression (2) on page 41.

$$\Delta I \frac{1}{\alpha} = I\sigma,$$

which is fundamental to our whole analysis. As a matter of fact, the statement of the problem in this form (2) appears to me at least as important as its actual solution expressed in (3). To repeat, the left part of the equation shows the annual increment in national income and is the demand side; while the right part represents the annual increase in productive capacity and is the supply side. Alternatively, the left part may be called the "multiplier side," and the right part the "σ side."

What is most important for our purposes is the fact that investment appears on both sides of the equation; that is, it has a *dual effect:* on the left side it generates income via the multiplier effect; and on the right side it increases productive capacity—the σ effect. The explicit recognition of this dual character of investment could undoubtedly save much argument and confusion. Unless some special assumptions are made, the discussion of the effects of investment on profits, income, employ-

[16] Stern, *Economica*, n.s. Vol. XII, pp. 163–71.

ment, etc., cannot be legitimately confined to one side only. For the generation of income and the enlargement of productive capacity often have diametrically opposed effects, and the outcome in each particular case depends on the special circumstances involved.[17]

Analyzing expression (2) further, we notice that even though investment is present on both its sides, it does not take the same form: for on the σ side we have the *amount* of investment as such; but on the multiplier side we have not the amount of investment but its annual increment, or its absolute *rate of increase.*

The amount of investment (always in the net sense) may remain constant, or it may go up or down, but so long as it remains positive (and except for the rare case when $\sigma \leqq 0$) productive capacity increases. But if income is to rise as well, it is not enough that just any amount be invested: *an increase in income is not a function of the amount invested; it is the function of the increment of investment.* Thus the whole body of investment, so to speak, increases productive capacity, but only its very top—the increment—increases national income.

In this probably lies the explanation why inflations have been so rare in our economy in peacetime, and why even in relatively prosperous periods a certain degree of underemployment has usually been present. Indeed, it is difficult enough to keep investment at some reasonably high level year after year, but the requirement that it always be rising is not likely to be met for any considerable length of time.

Now, if investment and therefore income do not grow at the required rate, unused capacity develops. Capital and labor become idle. It may not be apparent why investment by increasing productive capacity creates unemployment of labor. Indeed, as was argued on page 37, this need not always be the case. Suppose national income remains constant or rises very slowly while new houses are being built. It is possible that new houses will be rented out at the expense of older buildings and that no larger rents will be paid than before; or that the new houses will stand wholly or partly vacant with the same result regarding the rents.[18] But it is also possible, and indeed very probable, that the complete or partial utilization of the new buildings which are usually better than the old ones, will require the payment of larger rents, with the result that

[17] The effects of labor saving machinery on employment of labor is a good case in point. Some economists, particularly those connected with the labor movement, insist that such machines displace labor and create unemployment. Their opponents are equally sure that the introduction of labor saving devices reduces costs and generates income, thus increasing employment. Both sides cite ample empirical evidence to prove their contentions, and neither side is wrong. But both of them present an incomplete picture from which no definite conclusion can be derived.

[18] It is worth noticing that in both cases the construction of the new houses represents a misdirection of resources, at least to some extent. But a complete avoidance of such misdirection is perfectly impossible and even undesirable.

less income will be left for the purchase of, say clothing; thus causing unemployment in the clothing trades. So the substitution of capital for labor need not take the obvious form of labor-saving machinery; it may be equally effective in a more circuitous way.

The unemployment of men is considered harmful for obvious reasons. But idle buildings and machinery, though not arousing our humanitarian instincts, can be harmful because their presence inhibits new investment. Why build a new factory when existing ones are working at half capacity? It is certainly not necessary to be dogmatic and assert that no plant or house should ever be allowed to stand idle, and that as soon as unused capacity develops the economy plunges into a depression. There is no need, nor is it possible or desirable, to guarantee that every piece of capital ever constructed will be fully utilized until it is worn out. When population moves from Oklahoma to California, some buildings in Oklahoma will stand idle; or when plastics replace leather in women's handbags, the leather industry may suffer. Such changes form the very life of a free dynamic society, and should not be interfered with. The point is that there be no vacant houses while prospective tenants are present but cannot afford to live in them because they are unemployed. And they are unemployed because income and investment do not grow sufficiently fast.

The extent to which unused capacity, present or expected, inhibits new investment greatly depends on the structure of industry and the character of the economy in general. The more atomistic it is, the stronger is competition, the more susceptible it is to territorial, technological and other changes, the smaller is the effect of unused capacity on new investment. One firm may have an idle plant, while another in the same industry builds a new one; steel may be depressed while plastics are expanding. It is when an industry is more or less monopolized, or when several industries are financially connected, that unused capacity presents a particularly serious threat to new investment.

Strictly speaking, our discussion so far, including equation (2), was based on the assumption that α remained constant. If α varies within the time period concerned, the relation between investment and income becomes more involved. What the left side of the equation (2) requires is that *income* increase; and investment must grow only in so far as its growth is necessary for the growth of income. So if α declines sufficiently fast, a growing income can be achieved with a constant or even falling investment. But years of declining α have evidently been offset by others of rising α, because whatever information is available would indicate that over the last seventy years or so prior to this war the percentage of income saved was reasonably constant, possibly with a slight

50 THE AMERICAN ECONOMIC REVIEW [MARCH

downward trend.[19] Therefore, in the absence of direct government interference, it would seem better not to count too much on a falling α, at least for the time being.

In general, a high α presents a serious danger to the maintenance of full employment, because investment may fail to grow at the required high rate, or will be physically unable to do so without creating a substantial difference between s and σ. This difference indicates that large numbers of capital assets become unprofitable and their owners suffer losses or at least disappointments (see pages 44–45). Space does not permit me to develop this idea at greater length here.[20] But it must be emphasized that what matters is not the magnitude of α taken by itself, but its relation to the growth of labor, natural resources, and technology. Thus a country with new resources, a rapidly growing population, and developing technology is able to digest, so to speak, a relatively large α, while absence or at least a very slow growth of these factors makes a high α a most serious obstacle to full employment.[21] But the problem can be attacked not only by lowering α, but also by speeding up the rate of technological progress, the latter solution being much more to my taste. It must be remembered, however, that technological progress makes it *possible* for the economy to grow, without guaranteeing that this growth will be realized.

In a private capitalist society where α cannot be readily changed, a higher level of income and employment at any given time can be achieved only through increased investment. But investment, as an employment creating instrument, is a mixed blessing because of its σ effect. The economy finds itself in a serious dilemma: if sufficient investment is not forthcoming today, unemployment will be here today. But if enough is invested today, still more will be needed tomorrow.

It is a remarkable characteristic of a capitalist economy that while, on the whole, unemployment is a function of the difference between its actual income and its productive capacity, most of the measures (*i.e.*, investment) directed towards raising national income also enlarge productive capacity. It is very likely that the increase in national income will be greater than that of capacity, but the whole problem is that the increase in income is temporary and presently peters out (the usual multiplier effect), while capacity has been increased for good. So that as

[19] See Simon Kuznets, *National Product since 1869*, National Bureau of Economic Research (mimeo., 1945), p. II-89. I do not mean that we must always assume a constant α; rather that we lack sufficient proof to rely on a falling one.

[20] See my paper, *Econometrica*, Vol. XIV, particularly pp. 142–45.

[21] *Cf.* Alvin H. Hansen, *Fiscal Policy and the Business Cycle* (New York, 1941), particularly Part IV.

far as unemployment is concerned, investment is at the same time a cure for the disease and the cause of even greater ills in the future.[22]

IV. *An Economic Excursion*

It may be worth while to browse through the works of several economists of different schools of thought to see their treatment of the σ and of the multiplier effects of investment. It is not suggested to make an exhaustive study, but just to present a few examples.

Thus in Marshall's *Principles* capital and investment are looked upon as productive instruments (the σ effect), with little being said about monetary (that is, income or price) effects of investment.[23] The same attitude prevails in Fisher's *Nature of Capital and Income*,[24] and I presume in the great majority of writings not devoted to the business cycle. It is not that these writers were unaware of monetary effects of investment (even though they did not have the multiplier concept as such), but such questions belonged to a different field, and the problem of aggregate demand was supposed to be taken care of by some variation of Say's Law.

In the business cycle literature we often find exactly an opposite situation. The whole Wicksellian tradition treated economic fluctuations as a result of monetary effects of excessive investment. It is curious that all this investment did not lead to increased output which would counteract its inflationary tendencies. Indeed, as one reads Hayek's *Prices and Production*, one gets an impression that these investment projects never bear fruit and are, moreover, abandoned after the crisis. The σ effect is entirely absent, or at least appears with such a long lag as to make it inoperative. Prosperity comes to an end because the banking system refuses to support inflation any longer.[25]

σ fares better in the hands of Aftalion.[26] His theory of the cycle is

[22] That income generating effects of investment are temporary and that new and larger amounts must be spent to maintain full employment, has been mentioned in economic and popular literature a number of times. Particular use has been made of this fact by opponents of the so-called deficit financing, who treat government expenditures as a "shot in the arm" which must be administered at an ever increasing dose. What they fail to realize is that exactly the same holds true for private investment.

[23] Marshall was very careful, however, to distinguish between the substitution of a particular piece of machinery for particular labor, and the replacement of labor by capital in general. The latter he regarded impossible, because the construction of capital creates demand for labor, essentially a sort of a multiplier effect. See *Principles of Economics*, 8th ed. (London, 1936), p. 523.

[24] Irving Fisher, *The Nature of Capital and Income* (New York, 1919).

[25] Friedrich A. Hayek, *Prices and Production* (London, 1931). I don't mean to say that Professor Hayek is not aware that capital is productive; rather that he did not make use of this fact in his theory of the business cycle. See, however, his "The 'Paradox' of Saving," *Economica*, Vol. XI (May, 1931), pp. 125–69.

[26] Albert Aftalion, "The Theory of Economic Cycles Based on the Capitalistic Technique of

52 THE AMERICAN ECONOMIC REVIEW [MARCH

based upon, what I would call, a time lag between the multiplier and the σ effects. Prosperity is started by income generated by investment in capital goods (the multiplier effect), while no increase in productive capacity has taken place as yet. As investment projects are completed, the resulting increase in productive capacity (the σ effect) pours goods on the market and brings prosperity to an end.

A similar approach is used by Michal Kalecki. The essence of his model of the business cycle consists in making profit expectations, and therefore investment, a function (with appropriate lags) of the relation between national income and the stock of capital. During the recovery, investment and income rise, while the accumulation of capital lags behind. Presently, however, due to the structure of the model, the rise of income stops while capital continues to accumulate. This precipitates the downswing.[27]

Space does not allow us to analyze the works of a number of other writers on the subject, among whom Foster and Catchings should be given due recognition for what is so clumsy and yet so keen an insight.[28] I am also omitting the whole Marxist literature, in which capital accumulation plays such an important rôle, because that would require a separate study. The few remaining pages of this section will be devoted to Hobson and Keynes.

Hobson's writings contain so many interesting ideas that it is a great pity he is not read more often.[29] Anti-Keynesians probably like him not much more than they do Keynes, while Keynesians are apt to regard the *General Theory* as the quintessence of all that was worth while in economics before 1936, and may not bother to read earlier writings. I may say that Keynes's own treatment of Hobson, in spite of his generous recognition of the latter's works, may have substantiated this impression.[30]

Production," *Rev. Econ. Stat.*, Vol. IX (Oct., 1927), pp. 165–70. This short article contains a summary of his theory.

[27] Michal Kalecki, *Essays in the Theory of Economic Fluctuations* (New York, 1939). See particularly the last essay "A Theory of the Business Cycle," pp. 116–49. What Mr. Kalecki's model shows in a general sense is that accumulation of capital cannot proceed for any length of time in a trendless economy (*i.e.*, an economy with a secularly constant income). His other results depend upon the specific assumptions he makes.

[28] William T. Foster and Waddill Catchins, *Profits* (Boston and New York, 1925) This book is the most important of their several published works. It is interesting to note that they did come to the conclusion that "... as long as capital facilities are created at a sufficient rate, there need be no deficiency of consumer income. To serve that purpose, however, facilities must be increased at a constantly accelerating rate" (p. 413). This they regarded quite impossible.

[29] I am particularly referring to his *Economics of Unemployment* (London, 1922) and *Rationalization and Unemployment* (New York, 1930).

[30] See *The General Theory*, pp. 364–71.

Even though both Keynes and Hobson were students of unemployment, they actually addressed themselves to two different problems. Keynes analyzed what happens when savings (of the preceding period) are not invested. The answer was—unemployment, but the statement of the problem in this form might easily give the erroneous impression that if savings were invested, full employment would be assured. Hobson, on the other hand, went a step further and stated the problem in this form: suppose savings are invested. Will the new plants be able to dispose of their products? Such a statement of the problem was not at all, as Keynes thought, a mistake.[31] It was a statement of a different, and possibly also a deeper problem.

Hobson was fully armed with the σ effect of investment, and he saw that it could be answered only by growth. His weakness lay in a poor perception of the multiplier effect and his analysis lacked rigor in general. He gave a demonstration rather than a proof. But the problem to which he addressed himself is just as alive today as it was fifty and twenty years ago.[32]

This discussion, as I suspect almost any other, would be obviously incomplete without some mention of Keynes's treatment of the σ and of the multiplier effects. Keynes's approach is very curious: as a matter of fact, he has two: the familiar short-run analysis, and another one which may be called a long-run one.[33]

Keynes's short-run system (later expressed so admiringly by Oscar Lange [34]) is based on " . . . given the existing skill and quantity of available labor, the existing quality and quantity of available equipment, the existing technique, the degree of competition, the tastes and habits of the consumer . . . "[35] Productive capacity thus being given, employment becomes a function of national income, expressed, to be sure, not in money terms but in "wage units." A wage unit, the remuneration for "an hour's employment of ordinary labor" (page 41), is of course a perfect fiction, but some such device must be used to translate real values into monetary and *vice versa*, and one is about as good or as bad as another. The important point for our purposes is the assumption that the amount of equipment (*i.e.*, capital) in existence is given.

[31] *Ibid.*, pp. 367–68.

[32] Contrary to popular impression, Hobson does not advocate a maximum reduction in the propensity to save. What he wants is to reduce it to a magnitude commensurable with requirements for capital arising from technological progress—an interesting and reasonable idea.

[33] This whole discussion is based on *The General Theory* and not on Keynes's earlier writings.

[34] Oscar Lange, "The Role of Interest and the Optimum Propensity to Consume," *Economica*, n.s. Vol. V (Feb., 1938), pp. 12–32. This otherwise excellent paper has a basic defect in the assumption that investment is a function of consumption rather than of the rate of change of consumption.

[35] *The General Theory*, p. 245. See also pp. 24 and 28.

Now, the heart of Keynesian economics is the argument that employment depends on income, which in turn is determined by the current volume of investment (and the propensity to save). But investment (in the net sense) is nothing else but the rate of change of capital. Is it legitimate then first to assume the quantity of capital as given, and then base the argument on its rate of change? If the quantity of capital changes, so does (in a typical case) productive capacity, and if the latter changes it can be hardly said that employment is solely determined by the size of national income, expressed in wage units or otherwise. Or putting it in the language of this paper, is it safe and proper to analyze the relation between investment and employment without taking into account the σ effect?

The answer depends on the nature of the problem in hand. In this particular case, Keynes could present two reasons for his disregard of the σ effect. He could assume that the latter operates with at least a one period lag, the period being understood here as the whole time span covered by the discussion.[36] Or he could argue that over a typical year the net addition (*i.e.*, net investment) to the stock of capital of a society, such as England or the United States, will hardly exceed some 3 or 5 per cent; since this increment is small when compared with changes in income, it can be disregarded.[37]

Both explanations are entirely reasonable provided of course that the period under consideration is not too long. A five-year lag for the σ effect would be difficult to defend, and an increase in the capital stock of some 15 or 20 per cent can hardly be disregarded. I am not aware that Keynes did present either of these explanations; but there is just so much one can do in four hundred pages at any one time.

It would be perfectly absurd to say that Keynes was not aware of the productive qualities of capital. In the *long run* he laid great stress on it, possibly too great. All through the *General Theory* we find grave concern for the diminishing marginal efficiency of capital due, in the long run, to its increasing quantity.[38] There is so much of this kind of argument as to leave the reader puzzled in the end. We are told that marginal efficiency of capital depends on its scarcity. Well and good. But scarcity relative to what? It could become less scarce relative to other factors, such as labor, so that the marginal productivity of capital in the real sense (*i.e.*, essentially our σ) declined. But then on page 213 we read: "If capital becomes less scarce, the excess yield will diminish, without its having become less productive—at least in the physical sense."

[36] This again is not quite safe unless some provision for investment projects started in preceding periods and finished during the present period is made.

[37] The second assumption is specifically made by Professor Pigou in his *Employment and Equilibrium* (London, 1941), pp. 33–34.

[38] See for instance pp. 31, 105–106, 217, 219, 220–21, 324, and 375.

Why then does the marginal efficiency of capital fall? Evidently because capital becomes less scarce relative to income.[39] But why cannot income grow more rapidly if labor is not the limiting factor? Could it be only a matter of poor fiscal policy which failed to achieve a faster growing income? After all we have in investment an income generating instrument; if investment grows more rapidly, so does income. This is *the* multiplier effect of investment on which so much of the *General Theory* is built.

I don't have the answer. Is it possible that, while Keynes disregarded the σ effect in the short-run analysis, he somehow omitted the multiplier effect from the long-run?

V. *Concluding Remarks*

A traveller who sat in the economic councils of the United States and of the Soviet Union would be much impressed with the emphasis placed on investment and technological progress in both countries. He would happily conclude that the differences between the economic problems of a relatively undeveloped socialist economy and a highly developed capitalist economy are really not as great as they are often made to appear. Both countries want investment and technological progress. But if he continued to listen to the debates, he would presently begin to wonder. For in the Soviet Union investment and technology are wanted in order to enlarge the country's productive capacity. They are wanted essentially as labor-saving devices which would allow a given task to be performed with less labor, thus releasing men for other tasks. In short, they are wanted for their σ effects.

In the United States, on the other hand, little is said about enlarging productive capacity. Technological progress is wanted as the creator of investment opportunities, and investment is wanted because it generates income and creates employment. It is wanted for its multiplier effect.

Both views are correct and both are incomplete. The multiplier is not just another capitalist invention. It can live in a socialist state just as well and it has been responsible for the inflationary pressure which has plagued the Soviet economy all these years, since the first five-year plan. And similarly, σ is just as much at home in one country as in another, and its effect—the enlarged productive capacity brought about by accumulation of capital—has undoubtedly had much to do with our peacetime unemployment.

But what is the solution? Shall we reduce σ to zero and also abolish technological progress thus escaping from unemployment into the

[39] There is a third possibility namely that income is redistributed against the capitalists, but Keynes makes no use of it.

"nirvana" of a stationary state? This would indeed be a defeatist solution. It is largely due to technology and savings that humanity has made the remarkable advance of the last two hundred years, and now when our technological future seems so bright, there is less reason to abandon it than ever before.

It is possible that α has been or will be too high as compared with the growth of our labor force, the utilization of new resources, and the development of technology. Unfortunately, we have hardly any empirical data to prove or disprove this supposition. The fact that private investment did not absorb available savings in the past does not prove that they could not be utilized in other ways (*e.g.*, by government), or even that had private business invested them these investments would have been unprofitable; the investing process itself might have created sufficient income to justify the investments. What is needed is a study of the magnitudes of s, of the difference between s and σ which can develop without much harm and then of the value of α which the economy can digest at its full employment rate of growth.

Even if the resulting magnitude of α is found to be considerably below the existing one, a reduction of α is only one of the two solutions, the speeding up of technological progress being the other. But it must be remembered that neither technology, nor of course saving, guarantee a rise in income. What they do is to place in our hands the *power* and the ability of achieving a growing income. And just as, depending upon the use made of it, any power can become a blessing or a curse, so can saving and technological progress, depending on our economic policies, result in frustration and unemployment or in an ever expanding economy.

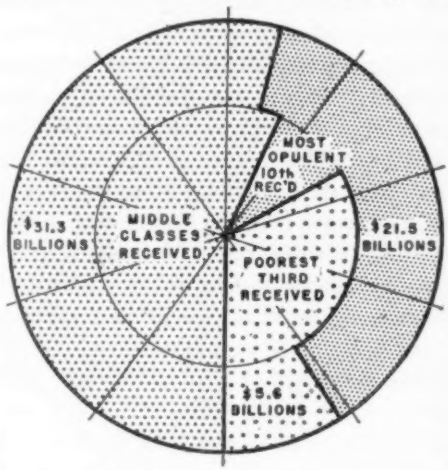
THE SOCIAL AND ECONOMIC DETERMINANTS OF THE DISTRIBUTION OF INCOME IN THE UNITED STATES[1]

By Morris A. Copeland[*]

As I understand this subject, it refers to what is technically called the size distribution of income, *i.e.*, the differences in size of income among the different segments of a population—What are the social and eco-

Chart 1

The Distribution of Income Paid Out to U.S. Families and Single Persons, 1935–36



In all 39.5 million U.S. families and single persons received $58.4 billions. Income was less than $780 per recipient for the poorest third, more than $2,600 for the most opulent tenth. See notes on Table I.

nomic determinants of income size distribution? Our knowledge of these determinants is seriously limited today because we have only begun to collect the facts of income size distribution. About the related subject of wealth size distribution we know very little indeed.

The most complete picture of income size distribution in the United States now available is for 1935–36. For our present purpose it is per-

* The author is a member of the research staff of the National Bureau of Economic Research.

[1] This is a slightly modified version of a paper presented at the Conference on the Evolution of Social Institutions in America held as a part of the Princeton University Bicentennial.

haps unfortunate that this year came during a period of prolonged, widespread unemployment, but without the Works Projects Administration we would not have had the picture at all. The National Resources Committee developed this picture out of data collected and tabulated by W.P.A. projects conducted by three federal agencies. The broad facts[2] revealed are summarized in Chart 1.

The areas of the three segments in the core of the pie represent three classes of income recipients—the upper tenth, the poorest third, and

TABLE I—SIZE DISTRIBUTION OF INCOME PAID OUT[a]
(Received by U. S. Families and Single Persons, 1935–36)

Classes	Income Range	Aggregate Income in Millions
Received by most opulent tenth	\$2,600 and over	\$21,450
Received by middle classes	\$780 to \$2,600	31,340
Received by poorest third	Under \$780	5,570
Total income paid out		\$58,360
No. of families and single persons		39,458,000

Source: N.R.C. reports—Consumer Incomes, pp. 65 and 95; Consumer Expenditures, p. 51.
[a] Income includes distributive shares paid out to consumer units (families and individuals) plus small gifts, annuities, alimony and income from estates and trusts. Income excludes direct relief. But the income range is stated in terms of income including relief, and consumer units are assigned to income classes on this basis. The institutional population, including the army and navy, is excluded.

the middle 57 per cent; the areas of the segments of the outer rim represent the incomes these three classes receive. The background grid lines are spaced at angular intervals of 10 per cent. We have no well established adjective to designate those in the upper-income brackets. Taking my cue from Adam Smith I propose to use the adjective "opulent."[3] Chart 1 shows that the most opulent 10 per cent of United States families and single persons received \$21.5 billions; that was 37 per cent of income paid out in 1935–36. The poorest third received 10 per cent. The most opulent 10 per cent included families and individuals with incomes of over \$2,600, the poorest third those with incomes of less than \$780 per year. Distribution was decidedly unequal in 1935–36. Rough estimates for 1941, 1942, and 1945 show an appreciable decrease in the percentage of income going to the most opulent 10 per cent, but only a

[2] See Table I.

[3] The *Wealth of Nations* was really concerned with national income rather than national wealth.

slight increase in the percentage received by the poorest third.[4] Incomes, of course, were higher for all three groups.

There are technical difficulties with the measurements in Chart 1 and with other measurements I shall use, which I shall not attempt to go into. I do not think the technical difficulties I am failing to mention involve serious distortions.

Unhappily we cannot show percentages for the United States for as long ago as 1900 comparable to those in Chart 1. We can, however, determine for each year since 1918 what percentage of income the most opulent 5 per cent of the population received. Income tax returns make such determinations possible. But the determinations are not too revealing. Apart from recent war years, no trend in the proportion of income received by the most opulent 5 per cent is discernible; the share of this group fluctuates around 25 per cent of total income paid out. It would appear that the pattern of income size distribution is highly stable.[5] In fact, income distribution was presumed to be highly stable before we had such measurements as those to which I have referred.

A half century ago, the pattern of income size distribution was thought by many economists to be a corollary of the marginal productivity theory—a theory that the distributive shares of income going to each individual are determined by the contribution to the total output of our economy imputed to each individual through market price adjustments. The stability of the pattern of size distribution was regarded as favoring this productivity theory, and it was felt that the income pattern could not very well be altered without lessening the efficiency of our economic system.

As we proceed, I think we shall find need to modify this view.

There are different "size distributions" of income. I shall consider two main types: the distribution of "income-paid-out-to-individuals" and the distribution of "disposable income." "Income-paid-out-to-individuals" refers broadly to the so-called primary distribution of income. As usually conceived, it includes payrolls, interest and dividends, the profits of unincorporated businesses, and net incomes from rents. These income items are designated "distributive shares." Alternatively, they have often been thought of as incentive payments to individuals for their labor and the use of their property in connection with production. The income percentages shown in Chart 1 refer to the primary distribution of income paid out.

"Disposable income" takes account not only of the primary distribu-

[4] See *Civilian Spending and Saving 1941 and 1942* (O.P.A., March 1943); and *National Survey of Liquid Asset Holdings, Spending and Saving* (U. S. Dept. Agric., Bur. Agric. Econ., June, 1946); also, *Federal Reserve Bulletin* 1946, pp. 844 *et seq.* The statement is based in part on unpublished tables which facilitate comparison of the measures for the four years.

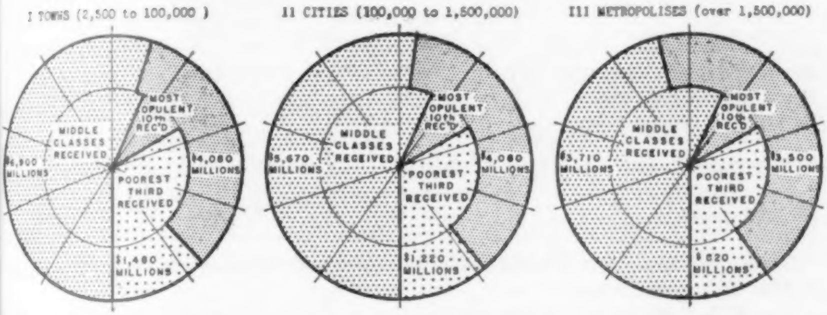
[5] This statement is based on preliminary figures in an unpublished manuscript by Simon Kuznets. Earlier computations show stability also, but for a shorter period.

tion of income through incentive payments related to production, but also of personal taxes paid and of various other transfer payments or redistributions of income.

We have just tried what may be called the approach of intertemporal differences in connection with the primary distribution of income paid out and found a good deal of stability over the past twenty-five years. Let us now consider what can be learned from interspatial comparisons.

CHART 2

DISTRIBUTION OF INCOME IN COMMUNITIES OF VARIOUS SIZES RECEIVED BY U.S. FAMILIES IN 1935–36



In all 8,080 families received a total of $12,460 millions. See notes on Table II.

In all 5,580 families received a total of $10,970 millions. See notes on Table II.

In all 3,300,000 families received a total of $8,030 millions. See notes on Table II.

Because of technical difficulties in inter-country comparisons I shall confine myself to data for the United States. Recent computations make it possible to present approximately comparable measures of size distribution for three groups of urban communities in 1935–36.[6]

Chart 2 shows that the percentage of income going to the poorest third declines slightly as the size of the community increases; so does the percentage going to the middle classes. On the other hand, the percentage going to the most opulent tenth increases. The three pies portray the income patterns in the same way as in Chart 1. It is important to recognize that the average income per family increases[7] with the size of the community, thus: towns $1,540, cities $1,960, metropolises $2,440. But there seems to be no reason to assume a causal connection between the increase in average income and the increase in income inequality.

[6] See Table II. The figures on which this table is based are preliminary unpublished estimates derived from National Resources Committee data. They are shown here through the courtesy of Miss Hildegarde Kneeland.

[7] This increase is partially offset by increased living costs.

In Chart 2 there appears to be a definite relationship between inequality and size of community—inequality increases as the size of the community increases. But when we try to determine whether income is more or less unequally distributed in rural communities than in towns, we encounter technical difficulties.[8] Because of these difficulties, we cannot say with confidence whether or not rural communities conform to

TABLE II.—DISTRIBUTION OF INCOMES IN COMMUNITIES OF VARIOUS SIZES[a]
(Received by U.S. Families, 1935–36)

Classes	Aggregate Income in Millions		
	Towns (2,500 to 100,000)	Cities (100,000 to 1,500,000)	Metropolises (over 1,500,000)
Received by most opulent tenth	$ 4,076	$ 4,076	$3,494
Received by middle classes	6,898	5,673	3,710
Received by poorest third	1,483	1,222	822
Total income	$12,457	$10,971	$8,026
No. of families	8,079,000	5,579,000	3,295,000

Source: Preliminary figures based on N.R.C. reports and worksheets. Estimates by courtesy of Miss Hildegarde Kneeland.

[a] Income includes imputed rents. It also includes direct relief, annuities, alimony, income from estates and trusts, and small gifts. Income received by single individuals and the institutional population is excluded.

the rule that income inequality decreases as the size of the community decreases. While these technical difficulties are present in the comparisons shown in Chart 2, they are of relatively slight importance. We can, I think, safely say that in 1935–36, so far as urban communities are concerned, income inequality increases significantly as the size of the community increases.

Does this mean that communities that differ in size tend to differ in pay-rate-and-price structure in such a way that size of community can be regarded as a determinant of the pattern of income size distribution? Are the facts now available in general favorable to such an hypothesis? One cannot answer this question objectively without considering alter-

[8] A substantial part of farm income does not pass through the market. Should we include the value of farm produced food consumed on the home farm as income? the rental value of farm houses? The answer to these questions makes a big difference. The poorest third of farm families received 11.8 per cent of the income of all farm families in the 1935–36 sample, if the usual valuations of such imputed income are counted. If the computation is confined strictly to money income, their share falls to 7½ per cent. But there is a further difficulty. A rural dollar is not the same as an urban dollar; it is quite possible that differences in living costs are wider for poorer than for more opulent families. But how much to allow for such differences in living costs is hard to determine.

native hypotheses. In an earlier version of this paper I attempted such consideration. To economize time this afternoon I shall be dogmatic. I think that an important part, but by no means all, of the relation between income inequality and size of city may be explained away on the basis of alternative hypotheses which are consistent with what we know today. However, our present stock of pertinent facts is a very scanty one; we may even be wrong in assuming that the 1935–36 relationship applies approximately in other years.

But let us assume for the moment that the price-and-pay-rate structure of a community varies with its size in such a way as to involve variations in income size distribution. If this hypothesis is correct, it requires a revised interpretation of the absence of trend, for the United States as a whole, in the pattern of size distribution over the past twenty odd years. A possible interpretation on this basis is as follows—first, that there has been a trend toward decreasing income inequality in communities of any given size, and second, that there has been an offsetting increase in the proportion of our population living in communities where the price-and-pay-rate structure is such that income inequality is relatively great. This amounts to saying that the movement of population into metropolitan communities has been a factor making for increased inequality of incomes, and that without this population movement the inequality of incomes would have decreased during the past twenty odd years. Our information on this point is scanty; but such as it is, I think it is on the whole favorable to this view.

Total income paid out consists of various distributive shares—payrolls, unincorporated business profits, net income from property rentals, and interest and dividends. It also includes imputed income, particularly farm produced food consumed at home and the rental value of owner occupied dwellings.[9] Recent computations make it possible to present separate distribution patterns for these four types of income. These patterns are shown in Chart 3.[10]

We may dismiss imputed income, Pie IV with one brief comment. Because so large a number of farm families are included in the poorest third of all families, a relatively large proportion—about a quarter—of this type of income is received by the poorest third. This means that imputed income is important as a complicating factor, both in making comparisons between urban and rural communities, and in making comparisons for the whole country for different years. If we are uncertain whether there is any real overall trend in the percentage of income paid

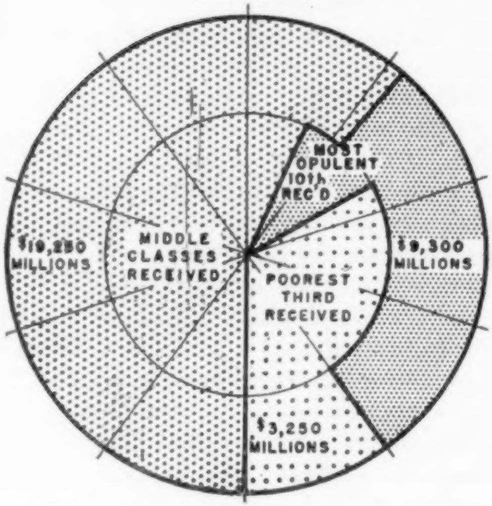
[9] For some purposes these two items are to be regarded as parts of the distributive shares, net rental income and profits respectively.

[10] Again the data are preliminary and are shown here by courtesy of Miss Kneeland. See Table III.

CHART 3

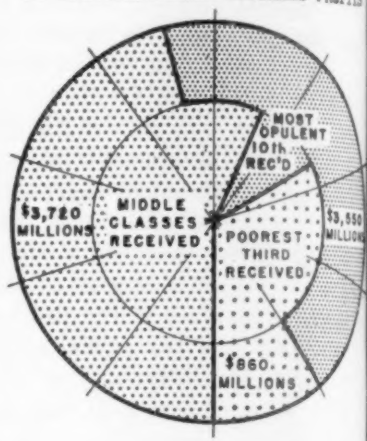
INCOME PAID OUT IN 1935–36
DISTRIBUTIONS OF VARIOUS DISTRIBUTIVE SHARES
(Among 30,210,000 U.S. Families)

I PAYROLLS



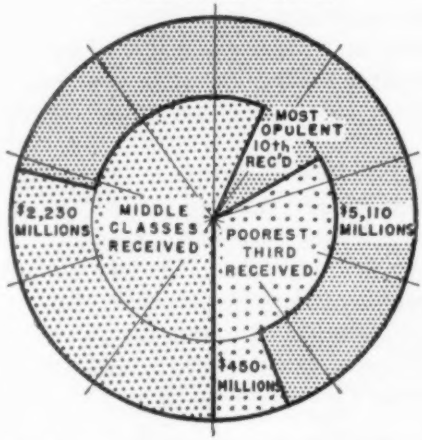
Total payrolls amounted to $31,800 millions.

II UNINCORPORATED BUSINESS PROFITS



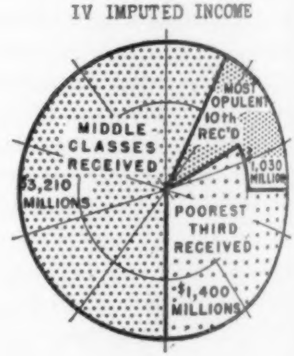
Total unincorporated business profits amounted to $8,130 millions.

III INVESTMENT INCOME



Total investment income amounted to $7,790 millions.

IV IMPUTED INCOME



Total imputed income amounted to $5,640 millions.

See notes on Table III.

out to the most opulent 5 per cent of income recipients during the past twenty odd years, and if we cannot say whether income is less unequally distributed in rural communities than in towns, it is in part because of the difficulties connected with the proper valuation of imputed income.

Payroll and profits are forms of income paid out which it is easy to regard as incentive payments, rewards paid for economic activity on the

TABLE III.—DISTRIBUTION OF INCOME PAID OUT IN THE UNITED STATES
(Received by U.S. Families[a] 1935–36)

Classes	Aggregate Income in Millions				
	(1) Payrolls	(2) Unincorporated Business Profits	(3) Investment Income	(4) Imputed Income	(5) Total Income Paid Out to Families[b]
Received by most opulent tenth	$ 9,306	$3,553	$5,114	$1,028	$19,001
Received by middle classes	19,255	3,720	2,227	3,213	28,415
Received by poorest third	3,252	857	453	1,402	5,964
Total income paid out	$31,813	$8,130	$7,794	$5,643	$53,380

Source: Preliminary figures based on N.R.C. reports and worksheets. Estimates by courtesy of Miss Hildegarde Kneeland.

[a] Number of families: 30,210,000.

[b] Income paid out to single individuals, to the institutional population, and to estates and trusts is excluded. The income basis used in assigning families to income classes in the case of columns (1), (2) and (3) excludes imputed income. For all columns the income assignment basis includes relief, small gifts, annuities, alimony, and income from fiduciaries.

part of the recipients. Both are somewhat unequally distributed. Forty-four per cent of unincorporated business profits and 29 per cent of payrolls went to the most opulent 10 per cent in 1935–36.

In the case of profits, separate figures for separate industries would doubtless reveal much more extreme inequalities. We know that the most opulent 10 per cent received only 18 per cent of farm profits and well over half the profits from other industries. We also know that in 1939 somewhat higher average profits were reported on tax returns by doctors, lawyers and security dealers than by most other industry groups.

The pattern of payroll size distribution reflects the wage and salary structure of our economy and the pattern of noncorporate profit size distribution reflects what we may call the wage-of-business-management structure of our economy. The economy pays different rates for different jobs.

What are the determinants of these differential rates of pay? Broadly we may say that the wage-and-salary structure for a single business

enterprise roughly reflects the relative importance of jobs from the point of view of that enterprise; that in a general way the more important job tends to receive the higher rate of pay. Broadly, too, it is true that the choices of consumers and other buyers are expressed in terms of market demand, and that business enterprises receive and then in turn pay out as payrolls and other distributive shares, funds which are roughly proportional to the market demands for their several contributions to national output. These relationships have a tendency to make the wage-and-salary structure and the noncorporate-profit structure of our economy such that the higher rate of pay will go to the job that is more important from the point of view of national output.

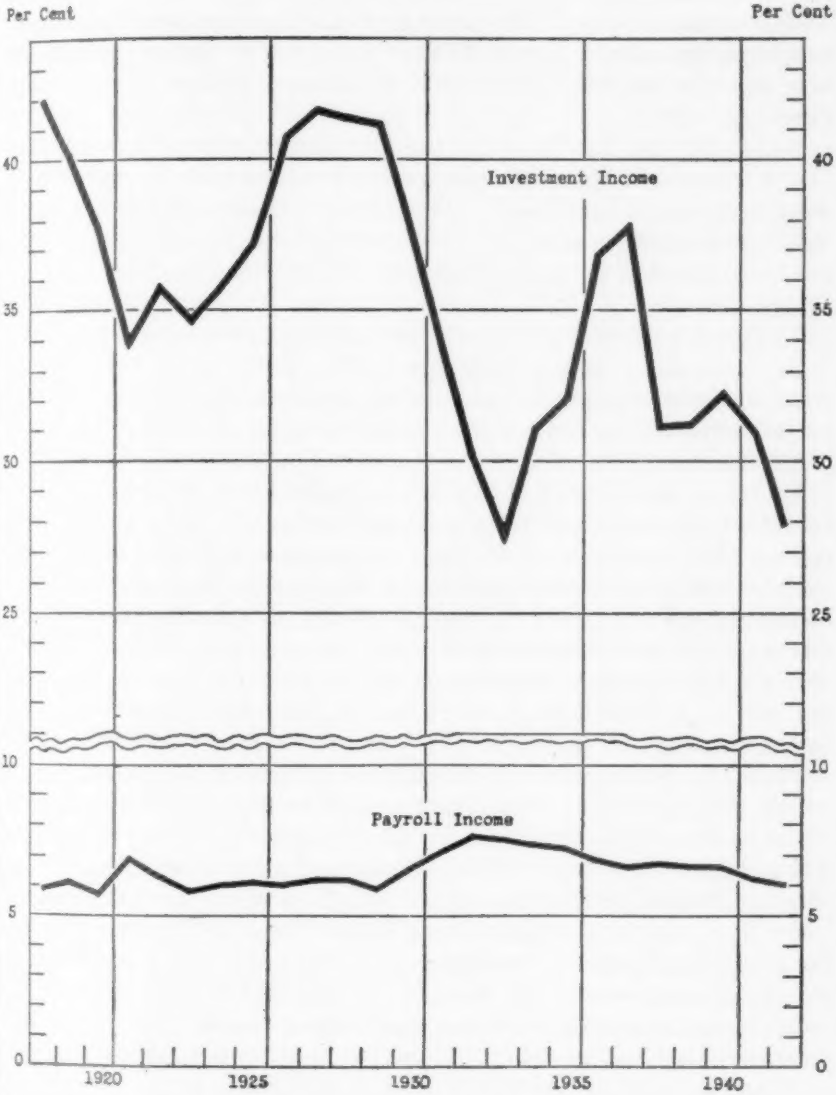
In this statement, the word tendency should be underscored. Few, if any, economists would fail to recognize that the tendency for higher pay to go to the socially more important job is by no means fully realized. What factors, other than this tendency, help to determine our national wage-and-salary structure? This question is so broad that I must confine myself to a few selected comments.

1. I have cited economic relationships which involve a tendency for differences in buyer demand to translate themselves through differences in employer demand into a scheme of incentive pay differentials to workers. This tendency, so far as it is operative, is sufficient to explain the fact of inequality in distribution of payrolls and noncorporate profits. It is not sufficient alone to explain the degrees of inequality shown in the two upper pies of Chart 3. Among other factors that must be taken into account is the nature of the market for various classes of labor. The force of custom is strong in the case of many wage and salary rates. Further, there is an element of monopoly both in the labor bargains driven by trade unions and in those driven by high corporate executives, and there is an element of monopsony in most labor bargains. Because of these considerations, there is no easy answer to the question whether a wider or a narrower spread in pay differentials would improve our scheme of pecuniary incentives to workers. But I think we need to concern ourselves with this question.

2. The histories of great fortunes abound in illustrations of the proposition that in the past our scheme of pay differentials has included some high rewards for activities that contributed little or nothing to our national output—for financial manipulations, for business acquired through freezing out competitors by unfair competition, even for business objectives that could be gained by bribing public officials. Much has been accomplished during the past half century toward closing such uneconomic avenues to opulence. But I do not think the job is finished. It is still possible to make money by guessing the cyclical turns of the stock market, by finding loopholes in the law, and by uneconomic monopolistic restriction of output.

CHART 4

PERCENTAGES OF PAYROLL AND INVESTMENT INCOME PAID OUT TO THE MOST OPULENT 1 PER CENT OF ALL U.S. RECIPIENTS, 1918–42



Source: Based on Adolph Goldenthal, T.N.E.C. Monograph No. 4. 1932 and 1933 figures are interpolations based on unpublished computations by Simon Kuznets. Figures for 1938 through 1942 were computed directly from tax return data and national income estimates by the author.

3. The tendency of buyer demand differences to be translated into worker pay differentials is limited by the importance of public employment. In 1939, to take a pre-war year, public payrolls amounted to almost 15 per cent of the national total. Government and private employers do not necessarily pay equal rates for comparable work. In the lower brackets on the whole, the federal government pays higher rates today than private employers. In the upper brackets the reverse appears to be the case; thus many private business executives get more than the President.

Nor is this all. The payrolls, the distribution of which is shown in Chart 3, include work relief earnings. Without this pay, the distribution of payrolls would have been materially more unequal. Again the profit distribution shown includes, in the case of farmers, farm benefits. Without these benefits, the profit inequality shown would have been materially greater.

4. Payroll inequality varies substantially from year to year. On Chart 4 the lower curve shows variations in the percentage of total payroll going to the most opulent 1 per cent of income recipients. Year-to-year variations in this percentage are clearly related to the volume of unemployment.

I think we are warranted in inferring from this showing for the most opulent 1 per cent that the percentage of payroll income going to the poorest third varies inversely—and varies somewhat more markedly—with the volume of unemployment. In other words, the degree of income inequality shown in Pie I of Chart 3 reflects not only the fact that different jobs receive different rates of pay, but also the fact that in 1935–36 there were perhaps 10 million potential workers—something like 20 per cent of our total labor force—who were left out of our scheme of job incentive payments entirely.

From the point of view of an effective scheme of job incentive payments, this aspect of income inequality has two important consequences. There is the obvious consequence that our national product is less than it would be with a larger effective demand for labor, whenever unemployment exceeds a minimum which I shall not try here to fix precisely —say 5 per cent of the labor force. There is also the consequence that the prospect of possible declines in the total volume of incentive payments induces a concern on the part both of employees and of management, a concern which results in a great variety of uneconomic practices designed to restrict productivity and to "make the work go around."

If inequality of income distribution is substantial in the case of payroll and noncorporate profit income, it is even greater in the case of investment income, see Chart 3, Pie III. Nearly two-thirds of interest, dividends and net income from property rentals taken together went to

the most opulent 10 per cent in 1935–36. Broadly we may say that so far as investment income affects the distribution of total income paid out, the determinants of that income distribution may be grouped under two heads (a) factors determining the level of investment income, and (b) factors determining the distribution of the ownership of investments. These two headings suggest lines of inquiry far too wide for us to compass this afternoon. Here again I shall arbitrarily limit consideration of these determinants of income distribution to a few brief comments.

1. The inequality of distribution in the case of ownership of investments is considerably greater than in the case of the ownership of other forms of wealth such as homes, autos, etc. Moreover, the inequality of distribution of ownership is greater in the case of some types of investment than of others. It is convenient to cite figures for the most opulent 5 per cent rather than the most opulent 10 per cent of families.

In 1935–36, they received about one-fourth of the total net income from rents and royalties, something over half of interest income and around 90 per cent of corporate dividends.

2. A change in investment yields means, for a given total of investment, a change in the level of investment income, and consequently a change in the distribution of total income paid out. The greater the investment yield, other things being equal, the greater the inequality of total income paid out; and the less the yield, the less the inequality of income. In absolute volume, interest and dividends are much more important than rent. Taking both volume and the existing distribution of ownership into account, a change in yields to stockholders has a substantially greater effect on the distribution of total income paid out than a change in interest yields; a change in net rental yields is of relatively slight importance.

3. It has been said that income paid out may be thought of as consisting of incentive payments to individuals for their labor and the use of their property in connection with production. If so, some of the incentive payments which constitute income paid out go not to living persons but to dead ones, or rather to their estates, *i.e.*, some of the income from investments. Chart 3 omits this small, logically inconvenient fraction of the primary distribution.

Further, if we are to accept the proposition that investment income is a form of incentive payment, we must construe it broadly. I suggest that this proposition be construed to mean that changes in investment yields may involve changes in the amount or composition of our national product.

Certainly an increased yield on one type of investment, other yields remaining unchanged, will attract funds and so affect production. Incidentally, in the case of yields on some corporate stocks, particularly

those of many smaller corporations, it may be said that yields go in significant part to management—that such stock yields are to be classed with noncorporate profits rather than with investment yields. They are a species of wages-of-management, and as such a form of incentive payment.

Investment yields should probably be regarded as incentive payments not only because changes in investment-yield differentials affect production but also because of the possible production effects of changes in the overall level of investment yields. I say "probably" because the nature of these effects is today a controversial subject. Formerly it was widely held that a general reduction in the level of investment yields would involve a reduction in the rate of growth of our industrial capacity, and that this in turn would restrict the rate of growth of national output. This view assumes that our economy in general operates at capacity. We can hardly make this assumption today. Today I think the pertinent question is "What effect would a change in the level of investment yields have upon the percentage of our national industrial capacity which we utilize?" Because there is disagreement as to whether a decrease in investment yields would increase or decrease our capacity utilization factor, the precise incentive status of investment incomes is today in doubt.

4. The upper curve on Chart 4 shows the percentage of investment income paid out to the most opulent 1 per cent of income recipients. There are special factors affecting the movements of this percentage—the depression of the '30's and government savings bond campaigns during the war. Moreover, our measurements in this case are rather less dependable than those for the lower curve. There is an apparent downward trend, suggesting a decreasing inequality in the distribution of investment ownership; but we shall need more information before we can be sure the apparent trend is a real one.

5. One further point with regard to the investment income distribution shown in Chart 3 needs to be noted. I have said that about nine-tenths of dividend income was received by the most opulent 5 per cent. The significance of this percentage is emphasized by the fact that dividends are not the whole of income from stock ownership. An important part of national income is not included in income paid out but is saved by corporations in the form of additions to surplus. This part of national income is often substantial, but it may be negative—corporations may dissave. They did in 1936. Withdrawals from surplus amounted to about 900 million dollars.[11]

The fact of corporate saving and dissaving is important for the relationship between investment yields and income inequality. If total

[11] *1944–45 Statistical Abstract*, p. 403.

income is measured as income paid out plus corporate savings, total income is more unequally distributed than is income paid out in years when corporations save. In years when they dissave, total income is less unequally distributed. The pattern of size distribution is less stable from year to year for total income than for income paid out.

Corporate saving is sometimes characterized, from the investors' viewpoint, as involuntary saving. The investor cannot elect to withdraw his share of added surplus. But he can liquidate his investment, and if the market is good, he may realize a capital gain. Such capital gains and additions to corporate surplus are both, in a sense, a form of individual income. But they are alternatives, not two separate forms; we should not count them both at once. One of them reckons individual income on the basis of corporate book values; the other reckons it on the basis of stock market values. Both alternatives involve difficulties. Income paid out is a convenient total, relatively firm but also incomplete in that it counts neither additions to surplus nor capital gains.

Because capital gains may accrue in periods other than the year in which they are realized, some economists hold that capital gains are not income. But they become disposable when realized. I propose to consider capital gains (less losses) as a form of disposable income.

Chart 5 presents a partial picture of the distribution of disposable income in 1935–36.[12] The picture is partial because it takes account of only a part of the redistributions that amend the primary distribution of income paid out. In Chart 5, disposable income means income paid out plus relief received minus personal income taxes, minor personal taxes and charitable contributions.

The distribution of disposable income does not look very different from that of income-paid-out. This is because our method of measuring income distribution is not very sensitive. The redistributions taken into account actually decreased the income at the disposal of the most opulent tenth by nearly 8 per cent and increased the income at the disposal of the poorest third by 8 per cent. Clearly public policy is an important factor in determining the distribution of disposable income.

The right hand pie shows the distribution of consumption expenditure —nearly 90 per cent of disposable income was spent in 1935–36. As we should expect, consumption expenditure was much less unequally distributed than disposable income. Still the poorest third accounted for only one-seventh of the total; the most opulent tenth for more than a quarter of the total.

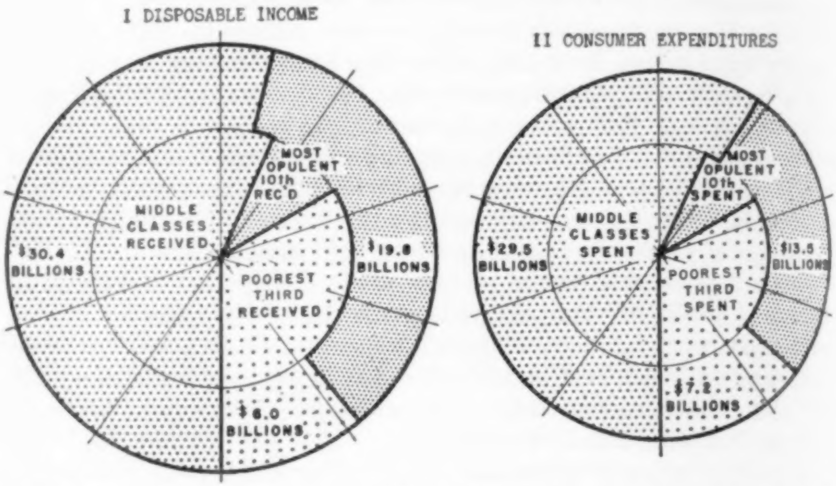
We do not have measures of consumed income for earlier periods, but with respect to this type of income distribution I think we can safely say that there have been many primitive communities in which there

[12] See Tables I and IV.

was a much smaller degree of inequality than there is in the United States today. I think we can safely say also that there have been many not-so-primitive communities where the most opulent 4 or 5 per cent have had a somewhat larger proportion of consumed income than they currently receive in the United States. Some such communities exist today. It seems probable, moreover, that inequality of consumed income

CHART 5

DISTRIBUTION OF DISPOSABLE INCOME AND CONSUMER EXPENDITURES OF 39.5 MILLION U.S. FAMILIES AND SINGLE INDIVIDUALS, 1935–36



Total disposable income amounted to $56.2 billions.

Consumers spent a total of $50.2 billions. See notes on Table IV.

has been decreasing in the United States. Such institutions as the movies exert an influence in this direction; so also do such developments as the improving status of the negro and the decreased importance of new immigrants. Cultural disparity is a condition favorable to consumed income inequality, and cultural disparity has been diminishing.

Saved income can be defined as the unspent residual of disposable income. Because Pie I of Chart 5 takes into account only a part of the redistributions that amend the primary distribution of income paid out, our picture of the distribution of saved income is not very satisfactory. It tells us that among the poorest third, dissavings materially exceeded savings; indeed, according to the N.R.C. report, net savings were negative for the poorest half of all consumer units in 1935–36.

These measurements are for a year that falls in the midst of a great

depression. But saved income was extremely unequally distributed even in 1942 and 1945. According to rough corresponding estimates prepared for these years,[13] the most opulent 10 per cent accounted for about 80 per cent of savings in 1942, and something less than 50 per cent in 1945. Even in 1945, the poorest third of consumer units apparently showed very small net savings. I suspect the year-to-year variations in the

TABLE IV.—DISTRIBUTION OF DISPOSABLE INCOME, CONSUMER EXPENDITURES, AND SAVINGS[a]
(U.S. Families and Single Individuals[b] 1935–36)

Classes	Aggregate Income in Millions			
	Income Paid Out (From Table I)	Disposable Income	Consumer Expenditures	Savings
Most opulent tenth	$21,450	$19,810	$13,520	$6,290
Middle classes	31,340	30,360	29,460	900
Poorest third	5,570	6,020	7,230	−1,210
Total	$58,360	$56,190	$50,210	$5,980

Source: Based on N.R.C. reports—Consumer Incomes, p. 95; Consumer Expenditures, pp. 51 and 77.

[a] The institutional population is excluded. Disposable income is reckoned before taking account of capital gains and losses and death taxes. It equals income paid out (Table I) plus relief and minus personal income, minor personal taxes and charitable contributions. The income range is the same as in Table I.

[b] Number of consumer units (families and individuals): 39,458,000.

pattern of saved income distribution are even wider than these figures suggest.

Particularly for savings, these measurements do not tell the full story, because there are important redistributions of income they do not take into account. On the one hand they fail to make deductions for gift and inheritance taxes and for endowment gifts; consequently they tend materially to overstate the savings, particularly the savings of the opulent. On the other hand, they fail to take account of realized capital gains and losses; such gains and losses affect chiefly the relation between the savings of the most opulent 1 per cent and those of the next most opulent 9 per cent.

In order to get some idea of what the typical pattern of savings distribution would look like, if we had more satisfactory measurements of disposable income, let us consider the relations between two distribution percentages for the most opulent 10 per cent. These percentages are: (1) the investment income percentage (65 per cent in 1935–36) and (2)

[13] See O.P.A. and B.A.E. bulletins cited above, footnote 4. The figures so far available for 1945 permit only a very rough statement.

the savings percentage.[14] The savings percentage presumably fluctuates widely from year to year, and may well have exceeded 100 per cent in 1935–36. The investment income percentage is somewhat more stable. But the two percentages are connected; we may say that the investment income percentage tends to stabilize at a level not very different from that of the moving average of the savings percentage. This relationship is important in understanding the determinants of income distribution. It applies to other income classes. If the average savings percentage for an income class is materially higher than the level of the investment income percentage, the latter will tend to trend upward because its percentage of investment ownership will be increasing. If the average savings percentage is materially lower than the level of the investment income percentage, the investment income percentage will tend to trend downward. It is true that the equilibrium condition for an income class may not be one of precise equality of the investment income percentage and the moving average of the savings percentage. The high investment income percentage of the most opulent may reflect in part higher yields than those enjoyed by other classes. This fact would tend to make the equilibrium condition for the most opulent one in which their investment income percentage is slightly higher than their average savings percentage. On the other hand, and this consideration is a more important one, income recipients may have high incomes and high savings percentages at their prime of life, and lower incomes and dissavings in old age. This fact tends to make the equilibrium condition for the most opulent one in which their savings percentage is slightly higher than their investment income percentage. It also tends to make the equilibrium condition for the poorest one in which their savings percentage is appreciably lower than their investment income percentage.

Now let us suppose there is no trend in the investment income percentage for the most opulent 10 per cent. If the level of the two connected distribution percentages is appreciably above the total disposable income percentage, if the most opulent 10 per cent continue to get a somewhat higher percentage of investment income than of disposable income, we may say that there is a mutually supporting relation between income inequality and inequality of investment ownership which is a significant factor in maintaining income inequality.

In the absence of a trend in the investment income percentage of the various income classes, we would be warranted in inferring a not very different typical pattern for the saved income percentages, a little over 65 per cent for the most opulent 10 per cent and a little less than 6 per cent for the poorest third.

For the most opulent 1 per cent, the investment income percentage

[14] Strictly, we should speak of the savings percentage exclusive of savings in the form of owner occupied homes, since we have not counted these as investments.

was apparently trending downward during the past 20 odd years. If there were such a trend for the most opulent 10 per cent, their saved income percentage may possibly have averaged less than 65 per cent.

Now while inheritances do not augment the disposable income of the most opulent 10 per cent considered as a class, inheritance and gift taxes and endowment gifts are to be regarded as deductions from the income paid out to the opulent in determining their disposable income. These deductions tend to reduce the saved income percentage for the most opulent 10 per cent. If their investment income percentage has trended downward over the past 20 odd years, it seems probable that inheritance and gift taxes have been a material factor in this trend. But we should not overestimate the possible effects of increasing the stringency of our system of death taxation. In 1935–36, the forms of income other than investment income were for the most opulent 10 per cent roughly sufficient to cover their consumer expenditures. With other income so unequally distributed as in 1935–36, it seems unlikely that a system of death taxation alone, however stringent, could reduce the investment income percentage and the savings percentage to anything like the level of the disposable income percentage.

Capital gains tend in general to increase the savings and disposable income percentages for the most opulent, but in some years there are capital losses. Does it follow that capital losses tend to decrease these percentages? Let us take the case of stocks. The answer is probably "yes" for the most opulent 10 per cent, because this group accounts for most of the capital gains and losses from investment in stocks. But for the most opulent 1 per cent the answer may be "no," because such capital gains and losses may not be distributed in the same way as dividend income. The most opulent 1 per cent may be better at trading in stocks than other investors. There is some evidence that this is so. A study of income distribution made for the T.N.E.C. shows capital gains and other sources of income for the most opulent 1 per cent of income recipients and for all recipients for 16 years ending with 1936.[15] For the most opulent 1 per cent, according to this study, capital gains exceeded losses during the 16 years by some $18 billion; the remaining 99 per cent incurred a net capital loss totalling about a billion. There are technical reasons for thinking that this computation materially overstates the superiority of the most opulent, but these reasons are not sufficient, I believe, to throw the evidence out of court.[16]

[15] Monograph No. 4 by Adolph Goldenthal, pp. 37–39. 1932 and 1933 were omitted from his computation. A very crude guess for these years can be made by assuming that tax returns of over $5,000 represent approximately the most opulent 1 per cent. Such a guess suggests that for the 18-year period the score would be for the most opulent 1 per cent a net gain of some $18 billion, for the remaining 99 per cent a net loss of over $2 billion.

[16] The technical objection is that the most opulent 1 per cent in each year are defined as those having in that year the highest incomes inclusive of their net capital gains. Thus an in-

We may set the mutually supporting relation between inequality of investment ownership and income inequality beside the superiority of the most opulent at investment management, and say that in these two respects income inequality today tends to bring about income inequality tomorrow. But there are other respects in which income inequality, once established, tends to perpetuate itself. I shall mention two of these without attempting statistical support: (1) The children of the most opulent 5 or 10 per cent, in general, receive better education than other children. With better education, they have a better chance at the more highly paid positions; and (2) Nepotism is probably sufficiently prevalent in our economy to give a significant advantage to the children of the opulent in obtaining highly paid jobs.

I have spoken of the primary and secondary distributions of income as if they were sharply differentiated. In fact, they are not. We have noted that relief work earnings are included in payrolls in Chart 3, and that farmers' profits include farm benefit payments. But cash relief has been treated as a secondary distribution of income. It could be argued that made-work earnings and farm benefits should have been treated as secondary distribution items too. Had they been so treated, the inequality of the primary distribution would have been materially greater than it appears to be in Chart 1; and the equalizing effect of the secondary distribution would have been correspondingly greater.

There is another respect in which the distinction between primary and secondary distributions is less sharp than it was once thought to be. If, in treating the distributive shares of the primary distribution as incentive payments, we have found need to construe the incentive idea broadly, it is clear that in this broadened sense the secondary distribution payments are incentive payments, too. We need to take into account their effects on production.

We may now briefly summarize our principal findings regarding the determinants of income size distribution.

1. Urban communities appear to differ in price structure in such a way that income inequality increases as the size of the community increases.

2. Various factors tend to make income inequality persist once it has been established—the mutually supporting relation between income inequality and inequality of investment ownership; the superiority of the opulent at investment management; nepotism; the better education of

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come recipient who has capital gains in years 0, 2, 4, etc. and losses in years 1, 3, 5, etc., might be included in the most opulent 1 per cent only in the even years. For the present purpose and for purposes of much other economic analysis it would be advantageous if we could find a way to base income size distribution measurements not on the income of a single year but on the income of a decade.

the children of the opulent. But there are other factors tending to alter the pattern of income size distribution. It is difficult to say confidently today whether the factors making for decreased inequality or the factors making for increased inequality are stronger. We may surmise that consumed income inequality has been decreasing gradually in recent years.

3. For payrolls and the profits of unincorporated business there is a substantial degree of inequality of distribution. These forms of income are most easily regarded as production incentive payments. An incentive system calls for some degree of inequality in job-pay rates. What degree of inequality would provide the most effective scheme of incentives is a question to which we need to give attention. So far as payroll income inequality is due to a deficiency in the total volume of incentive payments, the unemployed getting no job incentive payments at all, there is not only a potential volume of production that we fail to realize, but also an incentive may be given to employed labor and to management as well to take uneconomic steps to make the work go around.

4. We cannot say that altering the existing pattern of income distribution would necessarily have an adverse effect on national output. On the contrary, some modifications in this pattern might affect production favorably, *e.g.*, (a) more nearly equal pay for equally important work, in so far as the relation between public and private employment is concerned; (b) further steps to close uneconomic avenues to opulence; (c) steps which would decrease or eliminate deficiencies in the total volume of job incentive payments. The effect on production of a modification in the income distribution pattern through a reduction in the level of investment yields is a present subject of controversy.

5. In a broader sense, income from investments consists of incentive payments. Investment income is extremely unequally distributed. However, this inequality appears to have been diminishing, possibly due in part to increased death taxes. The percentage of investment income going to the most opulent recipients tends to stabilize at a level not much below their average savings percentage.

6. Secondary distributions of income are important. Public policy is a material factor in the primary distribution; it is a major determinant in secondary distributions. The dividing line between primary and secondary distributions is necessarily drawn at a somewhat arbitrary cutoff point.

POSTSCRIPT ON WAR INFLATION: A LESSON FROM WORLD WAR II

By WILLIAM J. FELLNER*

War and post-war inflation have now developed to a point at which it seems worth while to inquire into the policies by which the rise in the cost of living could have been avoided. The available data permit a rough evaluation of orders of magnitude. They also permit a comparison of the effects of certain hypothetical measures with the effects of the policies actually adopted.

Most of what is contained in this paper leads up to the proposition that a linear (that is to say, proportionate) income tax of about 10 per cent, applied to all income without exemption and superimposed upon the income tax structure that actually prevailed, would presumably have prevented the formation of any appreciable inflation potential. Given such a tax, and given the direct controls necessitated by specific shortages, it would not even have been necessary to use war bond "drives" as a further means of reducing the demand for goods. However, it would of course have been necessary to prevent such wage increases as might start an inflationary process even in the absence of a pre-existing excess of demand over supply (that is to say, even in the absence of an "inflation potential"). In arriving at this proposition, we shall reconsider certain elements of the theory of war inflation.

The Concept of the Inflation Potential, Ex Ante *and* Ex Post

Before defining a concept, it is useful to indicate briefly the purpose it is intended to serve. Concepts of the inflation potential should express the excess demand (at given prices) which ***tends*** to produce a rise in the price level and which in the absence of specific counter-inflationary measures, actually produces such a rise. Even a crude quantitative appraisal of the inflation potential presupposes that we limit our concern to the "primary" pressure on the price level because the magnitude of the secondary "cumulative" tendency, which develops if the primary pressure is not suppressed, depends largely on unpredictable psychological reactions. Besides, for considerations relating to policy, the primary pressure frequently is the more significant magnitude,[1] although

* The author is a member of the department of economics at the University of California.

[1] *E.g.*, a non-inflationary policy would attempt to eliminate or to suppress the primary pressure.

complete information concerning the effects of policies could of course be obtained only if both the primary and the cumulative forces could be estimated accurately. Furthermore, it should be realized that in a well-organized war economy the size of aggregate output depends mainly on the productive capacity of the economic system; and that, given the size of aggregate output, the pressure on the "cost of living" (or, generally speaking, on the price level of consumer goods and services) can be appraised more easily than the pressure on the price level of all goods and services. The so-called consumption function, in spite of all its crudeness, is a more dependable relationship than are the relationships existing between private investment demand and other measurable quantities. In addition, for the period to be considered, the pressure on the cost of living is a particularly significant concept because the monetary pressure against which the consumer-goods controls operated was not merely an important determinant of the effectiveness of these controls but also a significant determinant of the effectiveness of many producer-goods controls. Therefore the inflation potential will here be defined with respect to the pressure on the cost of living. It will express merely the primary pressure.[2]

We may now proceed to the definitions. By the *ex ante* inflation potential, as applying at some "present" date to a subsequent period,[3] we will mean the following: The excess of what the public, given its income during the subsequent period, ***would like to spend on consumer goods***, over the supply of consumer goods during the period, where income, demand and supply are valued at "present" prices In other words, the *ex ante* inflation potential is calculated on the hypothesis that prices remain unchanged and it explains why prices do not in reality remain unchanged, unless the inflation potential is suppressed.

The *ex ante* inflation potential either is suppressed by direct controls —in which case it expresses itself in an abnormally high savings ratio— or it results in a rise in the cost of living. If part of the *ex ante* potential is suppressed and another part translates itself into a price rise, the inflation potential becomes different *ex post* from what it was *ex ante*. The *ex post* inflation potential is the excess of what the public ***would have liked to spend on consumer goods*** during a completed period at the actual income level of the period, over the supply of consumer goods at actual prices (that is, over the actual value of consumption). The *ex post* in-

[2] The concept of the inflation potential, as defined in the subsequent paragraphs, is not identical with concepts suggested in some of the earlier writings on the subject, but it is similar to some of these. *Cf.*, mainly, Walter A. Salant, "The Inflationary Gap," *Amer. Econ. Rev.*, Vol. XXXII, No. 2, Pt. 1 (June, 1942), pp. 308–13; Milton Friedman, "Discussion of the Inflationary Gap," *ibid.*, pp. 314–20; G. W. Ensley and Richard Goode, "Mr. Warburton on the Gap," *Amer. Econ. Rev.*, Vol. XXXIII, No. 4 (Dec., 1943), pp. 897–99.

[3] All periods to be referred to in this article are clock-time periods.

flation potential is that part of the *ex ante* inflation potential which was suppressed, *i.e.*, sterilized in the hands of consumers, by direct controls. It does not contain that constituent of the *ex ante* inflation potential which, in the course of the period, translated itself into an inflationary process, because this constituent of the *ex ante* potential reflects itself *ex post* in the actual consumption expenditure rather than in a difference between what the public would have liked to spend and what it actually did spend. There exists the further difference between the *ex ante* and the *ex post* magnitude that the former is calculated at base period prices and the latter at the actual prices of the period. But this further difference loses its significance if the inflation potential is expressed as percentage of disposable income, because income, consumption, and the inflation potential are "inflated" in roughly the same proportion. The main difference is this: part of the *ex ante* potential is "unloaded" into an inflationary process and does not *ex post* appear as a "potential" but as actual consumption. Deflating the *ex post* potential does not recapture this constituent. In deriving the *ex ante* potential from the *ex post*, it is necessary to add a factor expressing that part of the *ex ante* inflation potential which gave rise to the price increase that took place during the period.

These concepts of the inflation potential are of course not free from complications. The difficulties enter mainly through the phrase "what the public would like to spend (or would have liked to spend) on consumer goods." During the period that will be considered here, an extensive system of direct controls was in effect. It may be argued that the existence of these controls has reduced not merely actual expenditures but also the desire of the public to spend. To the extent to which it has done so, the controls have prevented not merely an inflationary process (by suppressing an "inflation potential") but they have also prevented the very formation of an inflation potential.

The size of the inflation potential is important even if direct controls are taken for granted, because a high inflation potential reduces substantially the effectiveness of direct controls. The magnitude of the "political" pressure against price and wage ceilings, as well as the significance of illegal transactions, depends very largely on the size of the inflation potential, that is, on *how* profitable it is for certain groups of the population to have the regulations in question changed or to circumvent them. A strictly non-inflationary fiscal policy would have taxed away the entire *ex ante* inflation potential of recent years. Yet, in consequences of *specific* shortages, direct controls would be needed during major wars and in post-war transition periods even if no inflation potential were allowed to develop. The inflation potential is merely an aggregative concept, measuring the pressure against the general price

level (or cost of living) whenever the fiscal policy is not strictly "non-inflationary." Consumer controls, if they are effective, prevent the usual effects of this pressure on the price level. In addition, they may to some extent genuinely induce the public to more thrift and to this extent eliminate the pressure rather than merely render it ineffective. This is the source of the conceptual ambiguity mentioned in the preceding paragraph.

An alternative way of expressing the ambiguity in question is this. The foregoing definition of the inflation potential is equivalent to saying that it amounts to disposable income[4] minus "genuine" savings minus aggregate supply of consumer goods (*ex ante* or *ex post*, as the case may be), where savings are "genuine" if they are *not the product of certain controls* which interfere with the free spending of money. The *ex ante* potential is measured by the savings, other than genuine, that would be required to avoid any increase of the cost of living whatsoever; the *ex post* potential is measured by the savings, other than genuine, which actually were required to avoid a greater increase of the cost of living than took place during the period. Here the ambiguity enters through the italicized phrase "not the product of certain controls." For example, during the war, part of the money the public could not spend on automobiles became genuine savings. The public would have tended to save part of this money even if the *other* goods had not been subjected to controls (such as rationing and price control). Consequently, the pressure against which the other controls operated was not augmented by the full amount of these automobile savings. It might be objected that, on the other hand, the automobile controls themselves had to operate against the pressure arising from the desire to spend on automobiles. Yet during the greater part of the period under consideration, the controls applying to the automobile industry were not of such a nature that the magnitude of the amount the public would have liked to spend on cars was a significant determinant of the effectiveness of these controls. The same is true of durable consumer goods in general, and, even more generally, of goods that, through production controls, were taken completely off the market (or so nearly so that the question of the effectiveness of rationing and price control lost its significance for these goods).

This difficulty will be assumed away *initially* by interpreting "genuine savings" as the amount of savings that would accrue at a given income level if the goods "normally" purchased at such an income level were available. The hypothetical savings in question are the "normal" aggregate propensity to save for the income rate in question (not aug-

[4] Disposable income in the sense used by the Department of Commerce, that is, income payments minus personal taxes.

mented by such items as the automobile savings just considered). We disregard for a moment the limitations of the concept of the propensity to consume but we will return to them shortly. Thus calculated, the *ex post* inflation potential is $\alpha y-c$, if y is the disposable income of the period, α the "normal" average propensity to consume for the income level y, and c the value of the consumer goods purchased during the period. It is thereby assumed that the difference between disposable income times "normal" average propensity to consume, on the one hand, and actual consumption, on the other, measures, *ex post*, the savings enforced by the direct controls, and indirectly also the pressure against which the system of consumer controls operated.

It follows from what was said that the *ex ante* inflation potential cannot be derived by the process of deflating y and c for the price increase which took place during the period considered. By deflating the potential we would arrive at a magnitude that would be approximately the same in relation to the deflated disposable income as is the undeflated magnitude $\alpha y-c$ in relation to the undeflated y. The main difference between the *ex ante* and the *ex post* inflation potential is that the former includes that part of the potential which was "unloaded" into price increases and which therefore *ex post* does not appear in the form of a "potential." Consequently, in estimating the *ex ante* inflation potential, it is necessary to add to the *ex post* potential the equivalent of the actual price increase during the period. Yet, unfortunately, the price increase that took place during a given period cannot be translated into the corresponding constituent of the *ex ante* inflation potential without making arbitrary assumptions as to the length of time it took the unsuppressed fraction of the *ex ante* potential to unload itself into an inflationary process. It may be assumed, however, that if prices rose X per cent *during a year*, then the corresponding (unloaded) constituent of the *ex ante* potential was less than X per cent of the available yearly supply of goods. This seems a legitimate assumption because an *ex ante* potential amounting to X per cent of the available supply would presumably have resulted in a price increase of X per cent in *less than a year*. The yearly price rise of X per cent presumably was the result of a smaller unsuppressed potential at the beginning of the year which resulted in a smaller price increase in less than a year, which in turn contributed to creating a somewhat increased potential at that time, and so on. If, therefore, for a given year the *ex post* potential is measured by $\alpha y-c$, the *ex ante* potential for that year was greater by a margin, which, in relation to c, presumably was less than the percentage price increase.

A more precise formula would make the *ex post* inflation potential equal to $(\alpha-\beta\gamma)y-c$, where β means that fraction of y which "normally" would be spent on goods which, through production controls, are taken

completely off the market,[5] and γ means that fraction of β which, given these production controls, the public genuinely desires to save additionally, rather than spend additionally on *other* goods. β depends directly on the nature of wartime production controls and indirectly on substitutability conditions in the production processes (*cf.*, the relationship between automobile and tank production). γ depends on substitutability conditions on the demand side (that is, on the degree to which liquid assets and alternative consumer goods, respectively, are substituted for the consumer goods which have disappeared from the market).

Using expressions such as the foregoing should not be interpreted to imply that consumption is a function of income exclusively. The magnitude of the various propensities denoted by Greek letters may very well depend on further variables not appearing explicitly in these formulae (*e.g.*, on the supply of money). With the actual methods of war finance, these other variables assumed magnitudes that probably tended to increase α beyond the value derived from pre-war experience. But the tax to be considered in the following pages would have reduced the magnitude of these other variables. Consequently, we will make no explicit allowance for them. This means assuming that under the tax in question the relative quantitative significance of the other variables[6] would not have changed to such an extent as to affect the crude orders of magnitude with which we will be concerned. On the basis of the available figures, it is possible to lend this assumption plausibility with respect to the supply of money, which probably is the most significant other variable.

Furthermore, the expression $\alpha y-c$ will be used initially instead of the theoretically more satisfactory expression $(\alpha-\beta\gamma)\,y-c$ because it is difficult to evaluate $\beta\gamma$ numerically and because, after arriving at an initial numerical estimate, it will be necessary to make rough allowances also for another factor. This other factor bears on the difference between the intended and the statistical propensity to consume.

The Magnitude of the Tax that Would Have Been Required

In the years 1942, 1943, 1944, and 1945, individuals consumed the following percentages of their disposable incomes: 74.1, 73.3, 71.7, and 75.0, respectively. The "normal" average propensity to consume may have amounted to about 0.9. A slightly higher figure would be obtained by extrapolating the income-consumption regression line calculated by the Department of Commerce for the period 1929–41.[7] But only about

[5] Or "practically" completely, so that the question of the effectiveness of consumer controls loses significance for these goods.

[6] That is, their quantitative significance in relation to income.

[7] *Survey of Current Business*, April, 1942.

0.9 results if years such as 1937, 1939, and 1940 are taken in isolation, and this is more indicative because the war years were years of high employment, while the period 1929–40 includes several years of severe depression. The gap between 90 per cent, on the one hand, and the percentage figures appearing in the opening sentence of this paragraph, on the other, expresses the *ex post* inflation potential of the different years, as a percentage of the disposable income of the same year. Therefore, in these years the *ex post* potential may be estimated at between 15 and 18 dollars for every 100 dollars of disposable income.

The *ex ante* potential must have been greater because part of it got unloaded into an inflationary process and therefore does not appear in the *ex post* potential. The cost of living index rose by about 9 per cent in 1942, 3 per cent in 1943, 2 per cent in 1944, and 2 per cent in 1945. In addition to this rise, such phenomena as quality deterioration, the disappearance of cheap brands, and illegal transactions also were in the nature of price increases, so that the "true" rise of the cost of living undoubtedly exceeded the figures just given. Yet, as was pointed out earlier, the unsuppressed inflation potential, by which the *ex ante* magnitude exceeded the *ex post* for a yearly period, presumably was distinctly smaller in relation to c (and also in relation to y) than the ratio in which prices actually rose. The initial conclusion, to be qualified presently in several respects, is that the *ex ante* inflation potential—which a strictly non-inflationary policy of war finance would have eliminated—was in the order of 20 per cent of disposable income (probably slightly less). This figure is derived by adding to the 15–18 dollars per 100 dollars of disposable income a factor accounting for the actual price increase. If from Pearl Harbor on, about 20 per cent of *all* disposable income had been taken away by *further* taxation, no inflation potential would have developed. (With $\alpha=0.9$, a tax of 20 per cent would have eliminated an inflation potential of 18 per cent, considering that the tax would have reduced savings as well as consumption.)

There are, of course, many reasons why such an estimate must be regarded as very crude, and no attempt will be made to appraise all these reasons. Yet it should be emphasized that the two most obvious, and probably strongest, reasons call for downward correction.

In the first place, the $\beta \cdot \gamma$ factor, considered on pages 80–81, calls for correcting such an estimate downward. The numerical significance of this factor may easily have been in the neighborhood of 5 per cent of disposable income. For, in the good years of the period preceding the war, the expenditure on durable consumer goods used to be in the order of 10 per cent of disposable income, and expenditures on durable consumer goods are not the only ones entering into β. Consequently, even if γ should have been less than 0.5, $\beta \cdot \gamma$ may have been in the neighborhood

of 5 per cent of disposable income.

Secondly, even aside from this, the "normal" average propensity to consume may have been lower during part of the period in question than is the figure derived from the pre-1941 experience (that is to say, α may have fallen short of 0.9). There is no reason to assume that in the long run the average propensity to consume should decline markedly with rising income, because such a decline does not seem to have occurred over a period of one-half of a century during which the national income in constant prices increased fivefold.[8] Yet in 1941 the average propensity to consume was at the unusually low level of 0.84, which in terms of our concepts must be considered a "normal" value[9] for that year because no direct consumer controls were in effect in 1941.[10] The low propensity to consume of 1941 may have been a consequence of the rapid rise in income during the year, in consequence of which consumers "did not have time" to adjust their consumption expenditures to the new income level before the year was over. In fact, the relative significance of the defense sector in the economy grew considerably during the year. The cost of living rose about 10 per cent from the beginning to the end of the year, and an inflationary process of this kind always works in such a way as to give the government[11] consistently the advantages of the "first move" in the competitive bidding for resources which reflects itself in the inflationary process. Consequently, the "normal propensity to consume"—*i.e.*, the propensity to consume in the absence of consumer controls—is lowered (in the *ex post*, statistical sense[12]). Now, if after 1941 the actual controls had been in effect and, in addition, the inflation potential had been taxed away, conditions would have remained partly similar to those of 1941, so far as the "normal propensity to consume" is concerned. It is true that the "forced savings" would not have been produced by an inflationary process. But income, and at the same time the relative significance of the war sector in the economy, would have increased considerably through 1943,[13] and the increase in income would have been initiated by the expansion of war production, with consumers lagging behind the government.

[8] Simon Kuznets' estimates are the main source for this statement. For detailed references and discussion, see the present writer's *Monetary Policies and Full Employment* (Berkeley, Univ. of California Press, 1946), chap. III and appendices.

[9] Or almost so.

[10] Except for the restrictions of consumer credit adopted in the fall of that year.

[11] Or the first spenders of the "new money," regardless of who they are. In the models of the monetary over-investment theories, the investing entrepreneurs are the first spenders.

[12] In other words, the *ex post* propensity to consume falls short of the *ex ante*, because of the familiar concept of "forced savings."

[13] As they actually did.

During the war the propensity to consume was reduced also by the war bond drives. But we are assuming that in the hypothetical non-inflationary war economy there would have been no such drives in addition to the tax here discussed, although the public would have been free to buy government securities to the extent to which it genuinely desired to buy them. Consequently, no allowance will be made for a smaller propensity to consume under this heading.

We have seen that from 1942 through 1945 the *ex ante* inflation potential could be estimated at roughly 20 per cent, or slightly less, of disposable income, by a method which disregarded at least two important factors. One of these factors (the durable goods savings) may well have reduced the 20 per cent to 15 per cent, and the order of magnitude of the second factor (of the consumption lag just considered) may also have been several per cent. The downward correction—which was in the order of 5 per cent in conditions such as existed in 1941—ceased to be important after 1943, when war production reached its top level. The first downward correction, for durable goods savings, tends to turn gradually into negative (*i.e.*, into an upward correction) for the post-war transition period, when the public *would like to spend* on durable consumer goods not merely the "normal" fraction of its income but also part of the previously accumulated savings. But for the period following V-J Day, the original (uncorrected) figure for the inflation potential is considerably less than 20 per cent (for the last quarter of 1945 only about 7 to 8 per cent,[14] and for the first half of 1946 around 4 per cent). Consequently, the following generalization seems permissible for the period beginning with Pearl Harbor: The "crude" method, disregarding the durable goods savings and the consumption lag, leads to the assumption that the inflation potential amounted to almost 20 per cent of disposable income during the war; it seems reasonable to assume that the two downward corrections, for the factors disregarded by the "crude" method, were in the order of 5 to 10 per cent of disposable income; during the early phases of the reconversion period the crude figure was less than 10 per cent but, instead of being corrected downward, it needs to be corrected upward for the pent-up demand.

During the war, a strictly non-inflationary policy of war finance would therefore have taxed away additionally[15] about 10 to 15 per cent of disposable income, with somewhat different percentages in different subperiods. In 1941, the necessary rate of taxation would presumably have been smaller. There was no price control or rationing in effect

[14] In the last quarter of 1945 net savings of individuals amounted to 17.5 per cent of disposable income. In the first quarter of 1946 they amounted to 12.9 per cent and in the second quarter to 14.1 per cent of disposable income.

[15] That is, in addition to the taxes that were in existence.

during that year, and practically the entire *ex ante* potential translated itself into price increases. The cost of living rose about 10 per cent, and it seems very likely that a *yearly* increase of this size results from an initial inflation potential of smaller size. For the earliest phase of the post-war period (*i.e.*, for the last quarter of 1945), the rate required for strictly non-inflationary financing may have been somewhat smaller than the wartime rate.

It would not have been reasonable, however, to attempt "strictly non-inflationary financing" in the foregoing, somewhat dogmatic sense. As may be seen from the preceding analysis, the inflation potential can even now be reconstructed only by rather crude methods. The methods by which it could have been estimated beforehand would have involved some additional sources of error, although it is very likely that *ex ante* estimates, say, from quarter to quarter, would have resulted in figures of the same order. Wartime estimates were not subject to all limitations of the post-war projections because during the war full utilization could be postulated. The information available to the authorities would have rendered possible the evaluation of the correct order of magnitude of the inflation potential, but no more than this. It can hardly be contested that a slight deviation in the inflationary direction would have been less harmful than a deflationary pressure. The latter would have made it more difficult to raise the rate of aggregate output rapidly and significantly, and it also would have impeded the process of post-war readjustment very considerably. Consequently, a reasonable policy would have preferred to err slightly on the inflationary rather than on the deflationary side, all the more because direct controls would have been necessary at any rate to cope with the problem of *specific* shortages. A small or moderate *general* (over-all) upward pressure on prices would have been kept down effectively by the system of controls. It is submitted therefore that a correct *ex ante* evaluation of the data would have made it desirable to superimpose on the actual tax structure some measure such as a proportionate income tax, applying to all incomes without exception, and amounting, on the average, from 1942 on, to about 10 per cent of disposable income. This would have corresponded to slightly less than 9 per cent of income before personal taxes (except in 1942 when it would have corresponded to about 9.5 per cent).

Correct evaluation of the *ex ante* inflation potential of 1941 should have resulted in adopting a distinctly smaller tax of this nature at that time. An ideal policy would have varied the tax rate from time to time, but a comparatively small rate for 1941[16] and a rate of 8–9 per cent (on

[16] This does not mean, however, that in 1941 the yield of such a tax would have been small as compared to the yield of other taxes. It is merely maintained that the rate would have been small as compared to that of the subsequent years.

income before taxes) for the entire period of belligerency would probably have accomplished the desired objective. If the reader should feel uneasy about our downward corrections and if he should feel that a tax of about 20 per cent (corresponding to our initial crude estimate) might have been needed for closing the gap, he should take into consideration that the line of argument of the concluding sections of this article would be the same even if the required tax had been in the order of 20 per cent of disposable income. But the downward corrections are justified. A small additional tax in 1941 and an additional tax approaching 10 per cent (on income before taxes) during the war would have made it possible to hold the cost of living, although a small (but sterilized) inflation potential would probably have remained in the background of developments. As for the future, it is obvious that a reasonable post-war tax policy would have to be flexible and that it should be capable of changing the effective rate on short notice. It so happens that during the war this would not have been absolutely necessary.

Some economists might maintain that not merely a small but a significant inflation potential was required in order to be released at the appropriate time and to offset the deflation potential to be expected for certain phases of post-war economic development. In my opinion, the answer to this is that a deflation potential calls for expansionary fiscal policies when it develops and not for creating and suppressing a significant inflation potential many years earlier. The idea of creating and suppressing an inflation potential beforehand and of releasing it in the right moment rests on two main assumptions. The first is that it is possible to suppress a large inflation potential completely, or almost so. The second is that it is possible to release the inflation potential in the appropriate period and thereby to go a long way towards offsetting the deflationary tendencies of that period. The first of these assumptions already has proved thoroughly wrong, and so will the second in due time. Inflationary tendencies call, among other measures, for a rate of taxation that reduces the inflation potential to a manageable size; and deflationary tendencies call, among other measures, for expansionary fiscal policies absorbing the deflation potential. Not to take the appropriate measures in either of these two types of situations is a mistake, and it is unreasonable to expect that these two mistakes will cancel each other.

Proportionate Taxes Compared with Progressive Taxes and with Inflation

In the foregoing pages the "required tax" was conceived of as a proportionate income tax, applying to all incomes without exception, and superimposed on the taxes that actually have been in effect. Clearly,

there is nothing in the reasoning that could not be made to fit tax schemes of a different sort. There exists, however, a good reason why it seemed preferable to state the conclusion in this form. It is (almost) "obviously" and "unequivocally" true that the avoidance of inflation by such a tax would have been preferable to the actual degree of inflation. The possible counter-arguments, which will be mentioned briefly, would be quite unconvincing. The question of whether the avoidance of inflation by additional progressive taxes would have been preferable to the actual degree of inflation would, however, raise controversial issues.

A proportionate income tax with no exemption possesses distinctly objectionable features, ***but they all are shared by inflation, and inflation possesses additional objectionable properties.*** From the point of view from which a proportionate income tax is bad, that is, from the point of view of social equity and the so-called ability to pay, a rise in the cost of living is certainly no better. From a 1939 base, the cost of living index rose by about 6 per cent through 1941, by 17 per cent through 1942, by 24 per cent through 1943, by 26 per cent through 1944, by 29 per cent through 1945 (yearly averages). By August, 1946, the rise had reached 45 per cent and by October it had reached very nearly 50 per cent. The cost of living index disregards phenomena such as the deterioration of quality, the disappearance of inexpensive brands, violations, etc., and it seems, therefore, legitimate to conclude that the "true" rise in the cost of living must by now surely have exceeded 50 per cent (perhaps by a considerable margin). The dollar has lost about one-third of its value, if measured by the cost of living, and distinctly more if measured by wholesale prices. It would be difficult to argue that on the grounds of social equity a proportionate income tax in the order of 10 per cent (of disposable income) since 1942, and a considerably smaller tax in 1941, would have been worse than such a degree of price inflation. On the contrary, a proportionate income tax at least leaves relative positions unaffected, while the redistribution of income under price inflation strongly favors those belonging to well-established power groups. The argument would be no weaker if we had concluded that a tax of 10 to 15 per cent (corresponding to the full inflation potential) would have been required, or if we had concluded that a tax approaching 20 per cent would have been needed, corresponding to the inflation potential crudely calculated, without the appropriate downward corrections. But, in reality, such high rates would not have been required.

When a proportionate income tax is introduced (and price inflation is avoided), everybody's disposable money income[17] declines for a given aggregate real output, although of course the money value of the gross

[17] That is, everybody's income after personal taxes.

national product (GNP) and that of the national income[18] remain unchanged. At the same time, the money value of the government contribution to the GNP increases. The aggregate GNP and national income increase in monetary terms only if (and in the proportion in which) aggregate real output rises as a consequence of increased input of resources or increased productivity per unit of input. On the other hand, if the expansion of the government sector is brought about by an inflationary process (and tax rates are not increased), the money value of the GNP, that of the national income, and also that of disposable income, rise even for a given aggregate real output. The increased money income is injected into the system at some point in such a way that the changed pattern of income distribution shows no stability whatsoever, and then the population "fights out" the question of how this distortion should be eliminated by "adjustments." If the economic efficiency of the system were not affected by this procedure, aggregate real output and aggregate real consumption would be the same as under taxation, yet the distribution of income would be more "fortuitous"; or it could be viewed as being hastily "revised" in a series of struggles which take place in an acute emergency, and in which, therefore, well-organized power groups find it particularly easy to bring pressure to bear effectively. It might be objected that strategic power groups could insist on such a "redistribution" in an emergency even if the relative distribution pattern remained initially unaffected (as under a proportionate income tax). Indeed, to some extent they probably would. But it is highly probable that incentives for a struggle over redistribution would be much weaker in these circumstances than when large flows of money income are injected into the system at arbitrary points, where according to generally accepted value judgments they produce substantial distortion. As a consequence, not only is it unlikely that the inflationary method would result in a distribution pattern that would have been considered equitable *a priori* had it been subject to conscious planning, but the economic efficiency of the system as a whole can scarcely remain unaffected by the struggle in question. Aggregate real output and all its constituents, including the output of the war industries and of the consumer goods industries, is very likely to be reduced by the fight over adjustments. Moreover, an inflationary process—even if it does not reach "astronomical" dimensions—undoubtedly increases the danger of a subsequent serious setback.

It may therefore safely be concluded that the *superimposition* of a proportionate income tax, of the order of magnitude previously discussed, upon the taxes actually in existence would have been "prefer-

[18] Gross National Product minus depreciation and depletion allowances minus indirect taxes is equal to the national income. National income minus corporate savings minus contributions to social security funds plus transfer payments is equal to aggregate individual income payments. This minus personal taxes equals disposable income. Minor corrections are disregarded.

able" to the actual degree of price inflation. The same would be true even if all our downward corrections were considered inappropriate and if close to 20 per cent were regarded as the necessary degree of additional taxation, although this certainly would be an extreme position. It is however, impossible to make an equally clear-cut statement on whether it would have been "good" or "bad" to *substitute* proportionate (linear) taxes for part of the progressive taxes in existence,[19] or whether it would have been "good" or "bad" to supplement the existing taxes with *further* progressive taxes.[20] If the inflation problem alone is considered, then a tax is the less effective the more progressive it is. For example, with a sufficiently progressive, instead of a linear additional tax, it would have been necessary to tax away additionally more than the roughly 10 per cent of disposable income previously calculated in order to "close the gap." In the higher income groups, taxation partly reduces savings rather than consumption, so that progressive taxes increase the α factor of our formula. One-sided emphasis on the inflation problem makes progressiveness in general appear to be undesirable. The same is true of a one-sided emphasis on the problem of incentives. A tax affects incentives the more unfavorably, the more progressive it is, that is to say, the more disproportionately it reduces marginal earnings. On these grounds alone, a strong case could be made against progressiveness in general, in a setting in which the maintenance of effective demand does not give rise to difficulties. On the other hand, a very strong case can be made *for* progressiveness on grounds of social equity and thereby also in terms of the morale of the population. There are real issues involved in this complex of problems and it is impossible to state with general validity (*i.e.*, without expressing a very definite value judgment) that a given degree of progressiveness is preferable on balance to a higher or to a lower degree. One gets much closer to a "purely logical" proposition (which "should not be controversial") by stating that a proportionate tax of the magnitude here considered would have been preferable to the approximately 50 per cent increase in the cost of living that actually has occurred. For the rise in the cost of living also performed the functions of an income tax and certainly those of a nonprogressive one!

It should be admitted that even this proposition is not (strictly speaking) purely logical, although it comes very close to being so. In the first place, a person may have predilections for certain well-organized groups in the economy—on either side of the "fence"—and he then may feel that the distribution pattern actually established under more or less controlled inflation is more to his taste than would be the case under sufficient taxation. In fact, one of the main reasons why in major wars taxation always is insufficient is that too many powerful groups have a

[19] That is to say, to make the existing tax structure less progressive.

[20] That is to say, to increase the progressiveness of the tax structure.

good *a priori* chance of improving their relative position under an inflationary process, as compared to their would-be position under sufficient taxation. But it is difficult to see how a disinterested person should have a preference for the "inflationary" distribution as against a "planned" pattern; and it need not be futile to stress the logic of the case because "selfishness" in the foregoing sense is not the only reason for failure to tax adequately in inflationary periods. Another reason is the incomplete understanding of the issues involved. It is perhaps not unreasonable to assume that the attitudes towards the problem of taxation and of inflation would have been different, had it been realized what the order of magnitude of taxation was by which all or most of the actual degree of inflation could have been avoided.

A second possible objection relates to the problem of incentives. Even a linear additional tax would have raised marginal as well as average tax rates, although it would have raised marginal rates by no more than average rates. The effects of taxation on incentives consist of a favorable and an unfavorable constituent. The former is produced by the fact that it is necessary, in consequence of the tax, to work more, or to undertake a greater amount of risky investment in order to earn a given income; the unfavorable constituent arises as a consequence of the burden placed on the reward for additional effort. The unfavorable constituent becomes the more important, the more progressive the tax is (provided the problem of maintaining effective demand may be disregarded for some period). It would be difficult to forecast even the algebraic sign of the total effect of a proportionate tax. It is very unlikely, however, that an additional tax of the magnitude here considered would have had a stronger unfavorable effect on incentives than did the uncertainty concerning the nature and the timing of adjustments in the framework of the actual inflationary process. A minor qualification should be made. If such an additional tax had been in effect, some reduction of the surtax rate would have been necessary in the highest income groups in order to avoid taxing these groups at a marginal rate of about 100 per cent or more. Or, alternatively, the tax could have been levied on income after (other) taxes.

A Post-War Problem

This paper has been concerned with the bearing of fiscal policies on the problem of war and post-war inflation. A brief remark will now be made concerning the validity of certain elements of this reasoning for "normal" periods of expansion and contraction. Some elements of the analysis could be made to fit the usual developments during the cyclical process; others could not.

The main point that remains true, even for "normal" periods, is that an *ex ante* inflation potential[21] calls for higher taxes, while an *ex ante*

[21] However, normally it seems preferable to apply these concepts to the aggregate level of output rather than merely to the output of consumer goods because the aggregate level of

deflation potential calls for tax reductions and—if the deflation potential is substantial enough—for consumer subsidies. It is, of course, possible to substitute other expansionary monetary policies[22] for tax reductions and consumer subsidies, but the other monetary measures are either less effective or inferior in certain respects (although possibly superior in others) and it would therefore be highly desirable to combine them with those here considered. Measures other than those of a "monetary-fiscal" character are also very important, but we are not concerned with them here. A flexible tax policy is a promising means of reducing economic instability. A reasonable degree of flexibility could, however, scarcely be accomplished without maintaining the "pay-as-you-go system" and without the possibility of adjusting tax rates in, say, quarterly intervals. The difficulties standing in the way of such adjustments are political in nature. The necessary measure of flexibility cannot be accomplished without some delegation of power on the part of Congress—possibly to a committee of its own, rather than to the administration.

There is little hope that the adjustment of tax rates to changing business conditions could be accomplished without undue delay, if each adjustment raises the problem of the desirable degree of progression. Chances would seem to be better for accomplishing flexibility by adding to, or abating from, the basic progressive tax rates a linear (nonprogressive) element. The basic structure could then stay in effect for the entire fiscal year, while the special linear tax or refund, possibly even linear subsidy, would be adjusted to business conditions in shorter intervals. A recent suggestion to adjust the "first bracket" income-tax rate in quarterly intervals[23] belongs, generally speaking, in the category of measures just discussed. However, adjustment of the "first bracket" rate contains an implicit element of (changing) progression because the present income tax does not apply to incomes below the exemption limits. This kind of change in the degree of progression would not make it politically more difficult to achieve flexibility, although it would, of course, make for a smaller aggregate effect per given percentage change in the rate. We considered a tax without exemption because the tax was compared with inflation which operates with no exemption limits.[24]

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output cannot be regarded as "given" (*i.e.*, as determined by considerations lying outside the framework in which the estimate is made), except when full utilization may be taken for granted.

[22] Such as credit policies and mainly compensatory public works (possibly also producers' subsidies). It also is possible to substitute other measures for anti-inflationary tax increases; but in a period with a large stock of idle balances, these other measures (mainly credit policies) would be very little effective.

[23] *Jobs and Markets*, Research Stud. for Committee for Econ. Development (London-New York, McGraw-Hill, 1946), pp. 74–76 and 121.

[24] Except perhaps in that the very lowest income groups consume relatively more of the items the prices of which were held more successfully during the war than the cost of living in general.

THE INTERNATIONAL BANK, AN INSTRUMENT OF WORLD ECONOMIC RECONSTRUCTION

By NATHANIEL WEYL AND MAX J. WASSERMAN*

The International Bank for Reconstruction and Development is commencing operations at a time when the world need for long-term productive credit is perhaps more widespread and desperate than in any previous period of history. The Bank can serve as a major instrumentality in the reconstruction of the economies of war-torn nations and in the development of comparatively backward areas. In so doing, it can materially contribute to the creation of an economic basis for a durable peace. The present article is an attempted appraisal of the powers, limitations, functions and probable course of operations of the Bank in relation to the tasks which confront it.

I. *Objectives of the Bank*

The function of the Bank is to make, participate in and guarantee loans for the reconstruction and development of the economies of member nations. Although the Articles of Agreement do not say so, it is contemplated that these loans will be of long maturity. Loans can be extended only to member governments or to borrowers guaranteed by their governments, central banks or comparable agencies.

The two main types of Bank loans envisaged are for "the restoration of economies destroyed or disrupted by war" and for "the encouragement of the development of productive facilities and resources in less developed countries."

The Bank is supposed to promote long-range balance of payments equilibrium through the development of the productive resources of members "thereby assisting in raising productivity and the standard of living and conditions of labor in their territories." In the immediate post-war years, it will be the Bank's task "to assist in bringing about a smooth transition from a wartime to a peacetime economy."

The Bank is to make loans and guarantees only where private credit is not available on reasonable terms. It is to arrange its loans in accordance with a priority schedule, ensuring that the most urgent and

* The authors are economists on the staff of the Office of International Trade, U.S. Department of Commerce. The opinions expressed in this article are those of the authors and do not necessarily reflect those of the Department of Commerce, any other federal agency, or the International Bank for Reconstruction and Development.

useful projects receive first consideration. The Bank shall not be influenced by political considerations, nor may it require that "the proceeds of a loan shall be spent in the territories of any particular member or members."

II. *Reconstruction as against Development Credits*

The Bank is in effect limited to two broad types of operations: reconstruction loans and development loans. Credits to restore and reconstruct the economies of members who "suffered great devastation from enemy occupation or hostilities" will be extended on especially generous terms and will be given priority over other Bank operations. Specifically, "the Bank . . . shall pay special regard (to) . . . expediting the completion of such restoration and reconstruction." On a strict interpretation, this provision might be construed as obligating the Bank to tie up virtually all of its capital in loans to rehabilitate war-torn economies, since the reconstruction requirements of Asia, Eastern and Southern Europe are probably in excess of the Bank's total authorized lending power. That this was not the intent, however, is made clear by another provision of the Articles of Agreement that "the resources and the facilities of the Bank shall be used . . . with equitable consideration to projects for development and projects for reconstruction alike."

Some undetermined priority or right of way is presumably to be given to these reconstruction credits, and it is, therefore, possible to assume that the Bank will draw a clear line of distinction between reconstruction and development operations. The amount of reconstruction credits required is obviously limited by the extent of war damage and war dislocation. Evidently, the magnitude of reconstruction requirements will be conditioned by: (a) the pre-war productive facilities of the borrowing member; (b) the extent of damage to these facilities; and (c) the extent to which repair of that damage requires the use of foreign exchange.

These comments, however, merely skirt on the edges of the many problems involved. Should the Bank require that war-devastated member countries accomplish vital phases of their reconstruction work with their own local resources when the tasks could be performed more expeditiously, efficiently and quickly with borrowed dollars? Should uniform time periods be set for the completion of the over-all reconstruction task? For example, could the Bank legitimately deny a credit which would accomplish basic reconstruction in five years on the grounds that the member could complete the task unaided in twenty? To what extent should reconstruction programs be planned on a regional or continental, rather than merely national, scale?

What interpretation should be given to the requirement in the Bank's

Articles of Agreement that decisions should be nonpolitical in view of the close interrelationship between politics and economics in the contemporary world? Finally, to what extent, if any, will the Bank require that members use up official gold and hard-currency assets and requisition and sell private foreign assets before applying for reconstruction credits? Some of these questions are crucial to the determination of a broad line of Bank policy in respect to reconstruction.

If these policy issues are not dealt with directly, it is possible that the Bank will find itself making a series of *ad hoc* decisions which will not always be consistent with one another, and that the institution will, accordingly, be charged with favoritism or yielding to narrow political considerations.

Where the services or facilities to be rehabilitated are basic to the member nation's economy, there will be a stronger argument for Bank financing than where they are subsidiary or dispensable. This would apply particularly to transportation, coal, power and other facilities which must be restored before the devastated nation can make substantial progress in the remaining work of reconstruction. A second factor is whether the devastation has been sufficiently general to cause such a lowering of productivity as to make labor scarce in relation to the urgent work to be performed. A third dimension of the problem is the relation of the reconstruction loan projects placed before the Bank to the entire economy of the borrowing nation and to its economic relationships with the rest of the world.

In many cases it would appear that the extent and timing of reconstruction assistance by the Bank can best be measured in terms of overall, comprehensive, national reconstruction plans—such as the Monnet Plan in France—which are interrelated in their fundamental aspects and contain both production goals and scheduled flows of raw materials, semi-manufactures, finished products, equipment and labor. A reasonable condition of Bank assistance would be maximum employment by the borrower of his material and human resources in the national reconstruction task. Finally, to ensure a rough equity of treatment of the various claimants, it would seem reasonable that, other things being equal, the extent of assistance should vary more than proportionately with the extent of devastation.

There will be other cases, however, where programming on a continental scale is clearly requisite if the restoration of the productive capacity of devastated areas is to be achieved efficiently and in such a manner as to provide a sound and durable organization of the total economy. Loans for the restoration of European coal production, for example, could most profitably be considered in terms of a continental coal program, based on stimulating the most immediately productive

areas and assuring a rational flow of fuel to those nations which most direly need it. This might involve such related problems as readjusting bilateral trading agreements which require uneconomic cross-hauls of fuel and shipment of coal surpluses to hard-currency countries rather than war-devastated member nations.

The same considerations would apply, with perhaps even greater force, to credits for the restoration of European rail transport and power grids. National plans are often based on a compartmentalized conception of the world economy and involve creation of hothouse industries which can ill survive the gales of competition under multilateral trading. Application of broad criteria of continental economic development in the Bank's lending program would obviously create many difficulties. Formally, at least, the Bank's loans must be made on a national, rather than international basis, since the Articles of Agreement provide that the borrowers or guarantors must be member governments.

The Articles of Agreement state clearly and explicitly that the Bank's lending policies should be dictated purely by economic considerations without regard to the politics of member nations. Efforts might be made, however, to deny loans to nations, not because their political policies are objectionable, but because the economic consequences of those policies are considered detrimental to the expeditious achievement of world recovery. While the dividing line between political and economic affairs is sometimes obscure, it is felt that any attempt to evade the nonpolitical character of the Bank by indirection would destroy much of its prestige and usefulness.

With reference to the suggested requirement that members seeking reconstruction loans should be required to requisition and/or sell substantial proportions of their public and private gold and foreign exchange assets, it could be maintained that this would defeat some of the purposes for which the International Fund was set up, accentuate the geographical concentration of gold and key currencies, and weaken the ability of members to withstand balance-of-payment stresses. All this may be true in the long run. However, in the short run, the Bank will be faced with the fact that its available lending power is insufficient to accomplish more than the most essential tasks of world reconstruction. A cardinal, short-run criterion would, therefore, be to extend reconstruction credit only where it is most essential, only where it provides a maximum impetus to production and only where the borrower has no other reasonable alternate source of funds. Moreover, to the extent that credit resources are employed with maximum efficiency and concentrated on the repair of critically important sectors of devastation and dislocation, world-wide economic revival will be stimulated and the danger of the dollar becoming a "scarce currency" will be reduced or

averted. A criterion which might be applied to determine the appropriate extent of requisition and/or sale of gold and exchange assets is that holdings in excess of members' quotas in the Fund, together with whatever private exchange balances they may need for normal commercial purposes, are excessive. This would be a drastic decision for the Bank to take, but it would appear legitimate under present circumstances.

Reconstruction of war damage is not conceived of in the narrow sense of restoring to life those specific productive facilities which were destroyed by war. The restoration of obsolescent equipment, of uneconomically located plants, of redundant industries and of hot house enterprises which led a precarious life behind high tariff walls would merely serve to perpetuate economic maladjustments and preserve the rabbit warrens in which international depressions breed. The war has removed a great deal of economic débris; it has made it possible for nations to commence rational economic reconstruction without incurring heavy write-off costs on that part of their obsolete equipment which must be scrapped.

The Bank will presumably define reconstruction in terms of restoring a nation's gross national product to the level prevailing in a pre-war base period. Thus defined, the problem is to assist member nations in utilizing their available resources—raw materials, transport facilities, fuel, power, plant, idle manpower, existing technical and managerial skills—so as to restore pre-war output levels on the basis of a sound, stable economy and on a basis involving minimum loan assistance.

Some of the broad criteria to be considered in reconstruction programming might be: (a) *efficiency*, or optimum use of productive resources to achieve a given gross national product with minimum human and material resource expenditure; (b) *stability*, or minimum reliance for national well-being on those foreign trade goods which are subject to rapid fluctuations of demand and price; (c) *diversification*, or reduced dependence on a small number of productive processes; (d) *viability*, or minimum development of production facilities which can exist only as a result of unreasonable protective and restrictive legislation; (e) *balance*, or reconciliation of reconstruction and developmental projects on a continental or world scale to prevent that creation of specialized excess capacity which is likely to ensue when a group of nations simultaneously plan expansion of the same industries; (f) *integration*, or fostering a type of economic development which will permit eventual simultaneous and efficient employment of idle labor, resources and plant without involving investment requirements for full employment which are out of line with the capacity of the member nation's propensity to save, or which imply continued recourse to the Bank for additional funds; (g) *growth*, or

adequate concentration on industrial and other facilities, the long-range demand for which is likely to increase; (h) *repayment*, or financing programs which will create balance of payment surpluses in the borrowing member's economy sufficient for servicing and repayment of loans made; (i) *supplies programming*, or concentration on types of development which do not make exorbitant demands on over-strained production facilities in the countries wherein the International Bank credits are floated, resulting in inordinate postponement of the delivery of essential materials and the possible creation of excess capacity in the supplying nation. The relative importance of these suggested criteria will naturally vary in accordance with the problems and economic structures of the countries seeking credit assistance.

Unlike reconstruction loans, development credits are designed to create new productive facilities in areas where they did not previously exist or else to expand existing ones. The principal directive which the Bank has in this sphere is to encourage the development of "productive facilities and resources in less developed countries." The Bank evidently is supposed to give special consideration to the developmental needs of the under-developed areas of the globe—most of Asia, Africa and Latin America. Whereas the bulk of reconstruction credits will be concentrated on nations with highly complex and integrated economies, the developmental needs of members will be related to the extent of their economic backwardness and to the extent to which they possess inappropriately used or idle human and material resources which can be mobilized to expand productive facilities.

On this interpretation, once the repair of war damage and dislocation in Europe has occurred and once reconversion lending has run its course, the Bank's primary responsibility will be to extend industrialization, modern transportation, inanimate power and scientific agriculture in the areas of the world which presently lack them. The Bank has been given the task in Article I, Section (i) of serving as an agency for the global dissemination of the industrial revolution. To the extent that it does this, it will serve as an international equalizer of power resources, industrial and agricultural productivity and consequently of living standards and public health.

Through this tendency to concentrate on undeveloped areas, the Bank may unintentionally accelerate the secular shift of economic power away from Western Europe and the British Isles. Its activities would tend to diversify the significant channels of international trade and reduce the scope of the metropolitan-colonial trade pattern; import of agricultural and mineral raw materials, export of finished consumer goods.

Extending the frontiers of industrialization will inevitably involve

vertical as well as horizontal development of economically backward areas. A mere extension of plantation agriculture and mining in these regions would not, in most cases, accomplish the directive of "raising productivity, the standard of living and conditions of labor. . . ." Where it is economically feasible to do so, it would appear desirable that developmental credits for backward areas provide for the creation of processing facilities, of varying degrees of intricacy, in the raw materials producing nations.

If it becomes the major source of international investment in the post-war world, the Bank will serve to a large extent as the regulator of internationally financed industrial development. Among the main problems confronting its experts will be determining the most economic location for those new industries which it is called upon to finance and estimating the rates at which the global capacity of various industries can be expanded without creating instability and endangering loan repayment. These are not merely technical questions. They involve decisions, to the extent that the Bank is called upon to act affirmatively, as to the shaping of the world's resource and production structure and as to the geographical pattern of industries. The Bank will have to weigh against each other such considerations as the freezing of uneconomic concentrations of industries in ill-adapted areas *versus* the social dislocation which might result if existing labor and productive plant facilities were stranded by reason of the financing of more efficient productive facilities elsewhere.

While the Bank will have complete latitude to cooperate with the self-governing "less developed countries" in financing their emergence to a more advanced economic plane, it will be powerless to give similar assistance to colonies and trusteeships without the concurrence and loan guarantee of the mother country. Where metropolitan governments pursue policies of restricting the economic evolution of their colonies to mere extraction of agricultural and mineral production, the Bank will be unable to affect the situation directly.

Through a judicious use of its power to make developmental loans, the Bank could contribute to mitigating the impact of international cyclical fluctuations and stabilizing world economic conditions. A certain proportion of its lending capacity could be set aside for projects which would contribute in eminent degree to this purpose. Obviously, such projects should be technically of such a nature that work on them can be accelerated or retarded at will; they should require periods of many years for their completion; they should involve a high proportion of capital goods imports in relation to the total loan programs, and they should entail large simultaneous local currency investment by the borrowing countries. Combined hydroelectric developments, involving

power, irrigation, navigation and flood control, would be peculiarly suited to this purpose. Railroad construction and modernization programs would also be suitable.

From the standpoint of the lending nations, loans of this character would not only involve net capital creation and the usual magnified derivative stimulus to income and employment, but would concentrate their initial impact on the capital goods industries which generally suffer most from depressions.

From the standpoint of the less developed borrower nations, accelerated use of these loan commitments would help to counteract the reversal of the direction of private capital flow and the deterioration in the terms of trade which are such characteristic features of depression among undeveloped, raw materials exporting nations. The fact that large local currency investments would have to be synchronized with the capital imports would provide an inflationary effect on the economy of the borrower as well as that of the lender.

A program of this character would not involve leaving a large portion of the Bank's capital uncommitted. Loan authorizations could be made at any time. The rate of disbursement, however, would have to be inversely correlated with international business conditions. To ensure the most beneficial results, it would be desirable to distribute loans of this character among borrowers whose ratio of international trade to national income is high and whose exports have proved historically to be highly sensitive to world cyclical movements.

III. *Lending Capacity of the Bank*

The authorized capital of the International Bank is $10 billion; the aggregate capital subscription of those nations which are now members is $7,670 million, and the formal entry of six additional nations will bring the total subscription to about $8 billion. The first two per cent of member subscriptions, which is payable in gold or dollars, has already been called. The next 18 per cent, payable in the local currencies of members, will have been called by May, 1947. The remaining 80 per cent may be called by the Bank in gold or dollars, but only to the extent needed to meet or anticipate losses from the Bank's loans or guarantees.

By May, 1947, the Bank will have acquired some $720 million in gold and dollars, about $80 million in other hard currencies and approximately $800 million in less readily convertible currencies. This is the only portion of the Bank's capital which it can use to make direct loans. Accordingly, the Bank will be obliged to rely heavily on the money markets of the world, and specifically on the American market, to finance the massive global requirements for reconstruction and development which today confront it.

While federal and state legislation governing United States commercial bank investments and use of fiduciary funds at present restrict the purchase of International Bank obligations by these institutions, it should not be impossible to obtain eventually from the United States money market the balance of approximately $6,400 million which the Bank would be legally entitled to lend. Existence of large accumulations of idle funds in commercial banks, savings banks, insurance companies, endowments and in the hands of the public; inability to earn attractive interest on other gilt-edged bonds and debentures, and the comparative safety of the Bank obligations would combine to make bonds and debentures of the Bank desirable securities.

The market has, however, had little experience with comparable international instruments and foreign bonds are not in particularly good repute at present. Accordingly, it is possible that initially the Bank's obligations will not be received with enthusiasm. As a means of self-protection, the Bank may find itself obliged to feel out the market with small flotations in a cautious manner. It may be similarly compelled to concentrate on safe loans as a means of obtaining the confidence of private capital, without which it cannot develop and expand. To the extent that either of these things occur, the International Bank will find it increasingly difficult to satisfy the immense reconstruction credit requirements of the world at a time when United States governmental lending for reconstruction purposes will be dwindling.

An alternate possibility is that the Bank will find means of borrowing the funds it requires during the next two to five years and will be so swamped by the huge volume of legitimate requests for reconstruction assistance that the bulk of its lending power will be obligated.[1] In this event, the Bank would lack funds to carry out its long-range function of guiding and stimulating the development of world resources and industries. Receipt of additional funds through loan servicing and repayment will not materially improve this situation at first, because the Bank's loans will be long-term, with liberal repayment provisions for borrowing members who suffered heavy war devastation.

The total lending power of the Bank cannot exceed subscribed capital, reserves and surplus, an unusually conservative provision which is apparently based on the pessimistic assumption that all the credits extended by the Bank might default simultaneously.

There are several devices by which the Bank might, at some subse-

[1] By comparison, between V-E Day and September 30, 1946, Congress authorized direct credits and grants of $4.35 billion; the United States contributed $2.7 billion to UNRRA; the Export-Import Bank approved $2.2 billion of loan commitments; over $2.1 billion of lend-lease goods was transferred to foreign governments; surplus property with an original cost of $5.9 billion was sold abroad on cash or credit terms, and over $0.4 billion of civilian supplies was given away in occupied countries.

quent date, expand its total lending power. By affirmative vote of three-fifths of the members having four-fifths of the total vote, the Bank may amend the Articles of Agreement, eliminating the restriction of Bank lending authority to the combined capital and surplus of the institution. By a three-fourths vote of the total voting power, the Bank may increase its authorized capitalization to any extent desired, offering new shares to the member nations, but not, of course, requiring any member to purchase those shares.

All these actions can be vetoed by the United States (which possesses over 25 per cent of the total voting power), but not by any other single member nation. The Bretton Woods Agreement Act, Public Law No. 171, 79th Congress, approved July 31, 1945, provides that the President of the United States shall not agree to any amendment to the Bank's Articles, to purchase additional stock in the Bank or to loan of government funds to the Bank without statutory authority from Congress.

If Congress should subsequently decide in favor of an increase in the lending authority of the Bank, possibly the most effective method of accomplishing this would be to raise the ceiling on Bank loans to twice the Bank's capital and surplus. This would increase the scope of the institution without entailing additional American appropriations or adding to the United States public debt. Even under conditions of acute and prolonged world-wide depression, it would appear that a two-to-one ratio of loans to capital would not involve the Bank in major financial risks. A hypothetical illustration will make this clear.

Assume that world depression occurs at a time when the Bank has capital of $8 billion, outstanding loans of $14 billion, cash of $500 million, and an unused borrowing authority of $1.5 billion. Under extremely adverse circumstances, one-half of the Bank's borrowers might be forced to service their loans in local currency for the maximum permissible period of three years. Since the Bank must continue to meet interest and amortization of its debentures in hard currency or else go into default, this would undeniably create a problem. If the Bank was paying an average of three per cent interest and four per cent amortization, it would be obliged to find $490 million a year for three years, or a total of $1,470 million. It could accomplish this in the following manner: In the first place, it would probably have a minimum of $500 million in gold, hard currencies or safe government obligations, representing about a third of the 20 per cent of their capital subscription which members had paid into the Bank. Secondly, if the Bank had been operating for, say, five years prior to the depression with $5 billion of loans outstanding on the average over the period, it would have accumulated $250 million to $375 million in a special reserve to meet loan losses. Assuming the lower figure, the Bank would find that it had to

acquire an additional $720 million by calling up 11.3 per cent of that portion of its capital which had not been paid in. After doing this, it would meet all losses during the three-year period and still have $5,680 million of unpaid capital subscriptions which it could call into play to the extent that further suspensions of loan servicing by borrowers made this necessary.

The logic behind this arithmetic is clear. The Bank has two sources of strength which should enable it to weather any cyclical depression which does not degenerate into secular stagnation. First, if the Bank carries out its intent to make long-term loans at low interest rates, the annual service obligations of borrowers will not form a large proportion of their outstanding loans. Secondly, the Bank has $6,400 million in the unpaid capital subscriptions of members which constitute its last line of defense against epidemics of defalcation. About 40 per cent of this $6,400 million is payable in dollars, about 16 per cent in sterling, and an estimated 15 to 20 per cent in other currencies which are likely to remain strong throughout depression periods.

Moreover, since the Bank may avoid depression-caused defaults by permitting borrowers to service their obligations in local currency, it would have an excellent chance to recoup its losses during the upward phases of the business cycle.

IV. *Elasticity of Repayment*

Uncontrolled private foreign lending has resulted historically in waves of default, the most serious of which occurred in 1929–33. One of the basic causes of these defaults was that international portfolio investment consisted primarily of bonds and debentures with rigid servicing obligations, often protected against depreciation by a gold clause. This rigid structure of repayment proved incompatible with the conditions prevailing during cyclical breakdowns of the international economy. Flight movements of short-term capital, erratic fluctuations in new foreign lending and changes in the physical volume, price levels and terms of international trade, particularly such changes as were depression-born, often made it impossible for debtors to service. The inelasticity of the debt instrument made defaults frequent.

The chain of evils that followed the debt defaults of the depression included repatriation of defaulted obligations, continuance of total default when only partial default was economically justified, and, less frequently, outright repudiation of the debtor's foreign obligations.

The Bank provides sufficient elasticity in respect to direct loans to make such defaults less likely. Repayment by a member in his own currency may be permitted for a maximum of three years. The member is naturally obliged to guarantee the exchange value of his local currency

repayments, and satisfactory provisions as to conversion of the local currency repayments into the currency of the loan funds must be provided for. In addition, or alternately, "the Bank may modify the terms of amortization or extend the life of the loan, or both." These provisions are to be resorted to when the borrowing nation is faced with "an acute exchange stringency."

These broadly conceived measures of palliation leave the Bank Executive Directors with discretionary power to relax loan conditions to the extent necessary whenever depression and economic breakdown occur.

The Bank would, of course, suffer direct losses whenever it readjusted service payments down to a point below its administrative costs plus the expenses it incurred in borrowing the loan funds from the money market. To the extent that it relied on the local currency repayment provision, however, while the Bank's position in hard currency and gold would be temporarily weakened, there would be no necessary long run loss.

The above provisions should be sufficient to meet all ordinary depression conditions, provided they are realistically applied. The local currency repayment provisions would tide borrowers over brief recessions, but not over long ones. In the former case, borrowers would resume dollar servicing during the period of revival and would, at the same time, be obliged to begin repurchase of their local currency from the Bank.

It is nonetheless possible that the three-year limitation on local-currency repayment of loans will not prove to be a particularly wise provision. Uniform servicing of obligations to the Bank in local currency with exchange guarantee, plus contractual provisions compelling the borrower to devote given proportions of his estimated balance of payments surplus to repurchase of his currency, might have permitted a more rational flow of repayment. Unlike the readjustment provision, repayment in local currency permits upward, as well as downward, variations in the transfer burdens imposed on debtors. It serves to give bonds a status similar to that of equities and reduces or eliminates a major factor of rigidity and cause of dislocation in international balances of payments. It should be noted that the possible disadvantages of the three-year limitation on local-currency servicing are mitigated by the ability of members to use the Fund to ease the difficulties of transfer.

V. *Control over Bank Operations*

The Bank has evidently decided to place primary stress for the present on the sale of its own obligations to the public, rather than on guaranteeing loans made by others. This appears to have been the only possible

decision. By borrowing directly from the market, the Bank will automatically pool the risks of its loan portfolio, obtain its funds at a more uniform cost, and be in a position to decide on the interest and amortization charges which borrowers must meet on the basis of far broader considerations than the vagaries, prejudices and experiences of the money market. By selling its own debentures, the Bank will reduce the temptation to concentrate on loans which meet the approval of the investor but do not necessarily effectuate the purposes for which the Bank was founded. It is believed that borrower nations will prefer to obtain funds directly from the Bank on the theory that the terms will be more realistically conceived and that the approved loan purposes will stress over-all development of the borrowers' economies.

The Bank will presumably desire to have great freedom of action, not only in establishing the terms of loans and varying them as circumstances require, but also in making adjustments in the types of currency made available for projects in accordance with changes in world-wide market and supply conditions. The Articles of Agreement definitely restrict the authority of the Bank to lend or convert into other currencies the funds at its disposal. These limitations may become onerous during the first period of Bank operations, but will be progressively relaxed thereafter.

The Bank will start operations with some $800 million of gold and hard currencies received from paid-in capital. These funds may not be loaned or transferred into other currencies without the approval of the nations which contributed them. The same ban applies to repayments of principal of loans made with these funds, but does not apply to interest receipts from the same source.

If the Bank borrows from the money market of a member nation, which it can only do with that member's assent, it is free to convert the funds thus received into other currencies at its pleasure. This gives the Bank enough latitude of action to enable its borrowers to import goods with their loan funds from the most satisfastory world sources of supply. For example, if a nation borrowed $50 million from the Bank in Belgian francs to finance an electric power development and if its engineers discovered, after the project was underway, that price or other considerations made it desirable to shift a portion of the purchase orders from, say, Belgium to Czechoslovakia, then the Bank could sell some of its francs, which it had borrowed in the Belgian money market, for Czechoslovak crowns. This permits a considerable degree of flexibility in varying the different currency components of the Bank loans made with borrowed funds. If no such provisions existed, the prohibition against "tied" loans, *i.e.*, requirements that loan proceeds be spent for

the goods of the nation in whose currency the loan was floated, would be meaningless. Each currency in which the Bank operated would then be in a water-tight compartment and all loans would, of necessity, be tied.

The intricate provisions governing the use and convertibility of the Bank's funds serve to emphasize the falseness of a widely held popular belief that the Bank will be controlled by nations which are chronic debtors and, therefore, believers in what the late Lord Keynes termed "the euthanasia of the rentier." While it is a fair assumption that the Bank will favor low interest rates compatible with full employment programming and an expansionist world economy, this will be a consequence, not of any preponderant debtor voice in the councils of the Bank, but of the fact that the world's treasuries have learned from the experiences of the great depression and from the doctrines of modern economic theory.

The control of the Bank's affairs rests in actuality very largely in the hands of the United States. Based on a total capital subscription of $7,670 million, the United States casts 37.5 per cent of the total vote and, together with the United Kingdom, wields an absolute majority of 58.3 per cent.[2] Since the Bank will obtain the bulk of its funds from the United States market, it is worth noting that United States government assent is required before the Bank can either borrow in the United States or lend or transfer any portion of the United States paid-in capital subscription. The extent to which the Bank will be able to func-

[2] The distribution of voting control in the Bank and Fund reflects the shift of economic power from the Eastern to the Western Hemisphere and away from Western Europe.

As far as the International Bank is concerned, 49.8 per cent of the total voting power is vested in Western Hemisphere nations, despite the fact that this hemisphere contains only about ten per cent of the population of the globe. The British Commonwealth of Nations (including India and Egypt, but excluding Eire, Australia and New Zealand which are not members) has 28 per cent of the total voting power.

The breakdown of voting power by continents is as follows:

North America	45.6%	
(of which, United States)		(37.5%)
South America	4.1%	
Europe	34.1%	
(of which, Western Europe)		(29.3%)
(of which, Eastern Europe)		(4.8%)
Asia	13.2%	
Africa	2.5%	

This proportionate breakdown is very largely affected by the failure of the U.S.S.R. to join the Bank or Fund.

The power of the United States in the Bank is immense. (a) The United States may veto any borrowing of funds in its territories. (b) It may veto any amendment to the Articles of Agreement or any proposal to increase capitalization. (c) It will command a majority vote in the Bank with the aid of any combination of the following supporting votes: (1) the United Kingdom vote; (2) the Chinese and French vote; (3) the votes of any three Executive Directors, provided the Executive Director with the least voting power is not one of them.

tion as an international institution will to a large extent depend on the willingness of the United States to give the Bank freedom to borrow and lend dollars at its discretion.

VI. *The Rôle of Private Investment*

What rôle remains for private investment? The Bretton Woods Articles of Agreement state that the Bank may extend credit only if: (a) the member nation in whose territory the project is located is either the borrower or loan guarantor and (b) "the Bank is satisfied that in the prevailing market conditions the borrower would be unable otherwise to obtain the loan under conditions which in the opinion of the Bank are reasonable for the borrower."

Even if the Bank's lending power remains adequate for a long time to come to meet legitimate foreign credit requirements, a large and lucrative preserve will still remain for the private investor.

This reserved area would include:

(a) Flotations which are backed by such excellent collateral that the Bank refuses to participate on the grounds that the private capital market can provide funds on reasonable terms.

(b) For the present at least, the securities of certain non-member nations, such as Australia, New Zealand, U.S.S.R., Sweden and Switzerland.

(c) Securities of private enterprises in the territories of member nations which are offered without guarantee by the local government its central bank or comparable agency.

(d) The entire area of equity financing plus those direct investments which do not involve security flotations of any sort.

Within the narrower area of sale of foreign government bonds, it is possible that the Bank will lend at interest rates which are so much lower than those which private investors find attractive that it will automatically preëmpt this field. On the other hand, the Bank may encourage both capital participation and risk sharing by private investors. Approval by the International Bank may eventually be regarded by the money market as the criterion of soundness and solvency in respect to most long-term international borrowing by governments.

PRICE CONTROL UNDER IMPERFECT COMPETITION

By M. BRONFENBRENNER*

This paper is concerned with first recalling, then developing a few relatively simple propositions in the theory of imperfect competition which have been neglected in wartime and subsequent controversies regarding price controls of the OPA type. Analysis is limited to the theory of the individual firm and industry, and to a short run in which the number of firms in any industry remains sensibly constant. No attempt is made to discuss such macro-economic problems as the effect of price control on "production as a whole" in an "imperfectly competitive economy." Nor is attention paid to the complex of additional problems arising, at the extreme microeconomic end of the scale, from the impact of price control on patterns of joint production within imperfectly competitive firms.

I

Opponents of the OPA appear to have been generally successful in presenting to the public and its Congressmen "free" competition as the exclusive alternative to regulation, and convincing them further of the certainty of increased production (sometimes at lower prices!)[1] following the relaxation of controls. The first of these statements is a simple falsehood. We shall confine ourselves to considering the extent to which the second fails to hold when the first is abandoned.

An increase in the price of a commodity will induce increased output under free competition, both in the short and in the long run. Under imperfect competition, however, the proposition that price control can

* The author is an economist in the research department of the Federal Reserve Bank of Chicago and associate professor of economics at Roosevelt College. The views expressed in this study are purely personal and do not represent conclusions of the Federal Reserve System or the Federal Reserve Bank of Chicago.

[1] Newspaper and magazine forecasts of fairly early price decline following decontrol can be divided into two groups, according as they do or do not rest on notions of "economies of large-scale production" which involve implicit notions of declining marginal cost and supply curves. Such curves are (almost) universally incompatible with the free (atomistic) competition simultaneously postulated by the same writers' reliance on "supply and demand." The majority of the popular anti-OPA writings, it seems after an informal survey, do in fact rest upon the logical contradiction of falling costs and free competition. A minority, which relies rather on shifts of supply curves to the right, following increased supply of raw materials and other components, is little if any more respectable. Its forecasts lack adequate consideration of the *prices* required for the increased supplies, as well as of demand increases out of incomes generated by the increased production. Logically impeccable but factually questionable is the position of a smaller minority which expects demand curves to shift substantially to the left when relatively small increases in output are sufficient to remove particular commodities from the "ultra-scarce" category.

increase output while lowering price is at least as old as the first edition of Professor Pigou's *Economics of Welfare*, and owes its usual diagrammatic demonstration to Mrs. Robinson's *Economics of Imperfect Competition*.[2] Control has the effect of collapsing, so to speak, the imperfect competitor's demand and marginal revenue curves to horizontal lines at the fixed price of OP (in Figure 1), whereas the "shadow" or "uncontrolled" demand curve D and its corresponding marginal revenue

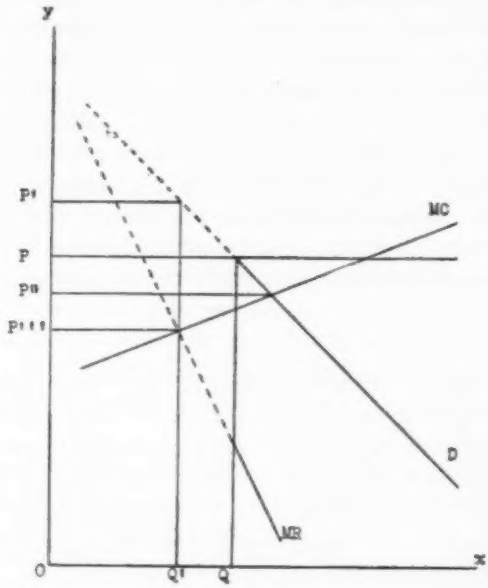


FIGURE 1

curve MR continue upward, as shown by the broken lines of the diagram. The firm, if unregulated, would maximize profits by selling OQ' units at OP'. Control thus results not only in a price decline ($P'P$ in the diagram) but also in an output increase ($Q'Q$). The simultaneous increase of output and lowering of price may hold not only for OP fixed above the "competitive" price OP'', where marginal cost equals demand price, but for OP fixed even lower, at any point above OP''', which equals equilibrium marginal revenue under uncontrolled imperfect competition.

The conventional application of the analysis illustrated by Figure 1 is to the control of monopoly or to what Professor A. P. Lerner calls

[2] The relevant sections of *The Economics of Welfare* are Sec. 11 of Chap. 21 and Sec. 23 of Appendix III. In *The Economics of Imperfect Competition*, see Sec. 1 of Chap. 13, and particularly Fig. 58, p. 162.

"counterspeculation." The war-economy or OPA type of control, however, may go further, fixing OP consciously below its current competitive value. The actual level chosen may be a pre-war or a "normal" competitive one. The question no longer relates to monopoly control in the strict sense, but goes further in the interest of preventing inflation or channelling resources into war uses.

Such an instance is shown on Figure 2. Price is fixed at OP as before,

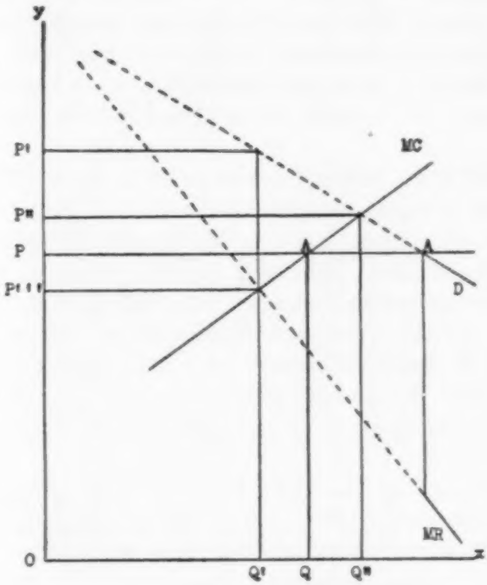


FIGURE 2

which in this case lies below OP'' as well as below OP'. The output OQ, while below the competitive level OQ'', remains above the uncontrolled imperfectly competitive level OQ'.

This illustration indicates among other things the unwisdom of undiscriminating proposals for decontrol when OQ reaches a specified level—such as the 1941 output or an equality of supply with demand at OP—if the alternative is an imperfectly rather than a purely competitive level of production, *i.e.*, if the alternative to (OQ, OP) is (OQ', OP') rather than (OQ'', OP''), since decontrol under imperfect competition could cause production declines below these satisfactory standards. Even under competitive conditions, an inelastic marginal cost curve MC can cut drastically the production increase (QQ'') achievable by decontrol, and force a sharp increase from the controlled to the competitive price (PP'') with a relatively small addition to output. (Extreme cases of

absolute inelasticity may be caused by absolute scarcities of raw materials or components, or by industrial disputes at strategic points in the productive process.)

An elastic competitive supply curve, however, does not necessarily imply a strong case for decontrol—monopoly considerations aside. Particular circumstances, varying as between commodities, will determine whether or not the increase in production is considered desirable socially. If the commodity is a peacetime one competitive in production with military output, or a luxury item competitive in production with scarce necessities, the increased production may not be an unmixed blessing. The decision as to the desirability of decontrol must involve not only the commodity to be decontrolled but its close substitutes in production.

Whenever OP is set below the competitive price OP'', or whenever OP'' rises above a regulated price OP which is maintained rigidly on "hold-the-line" principles, a fringe of unsatisfied demand makes its appearance. Its extent is indicated by the length of the line AA on Figure 2. Under our present assumptions, but unfortunately not in the real world, the converse proposition also holds; the presense of an unsatisfied fringe of demand demonstrates the fixation of price below its competitive level.[3] Rationing, formal or informal, private or public, voluntary or involuntary, is required to maintain control under these conditions.

An excess of zeal on the controllers' part is certainly conceivable which will set OP below OP''', or maintain it constant while OP''' rises above it, thus restricting production unintentionally below even its imperfectly competitive quantity. These are also instances in which particularly large price increases may be expected following decontrol.

The point to be stressed in conclusion, however, is that price control under imperfect competition may result in output increases above the imperfectly competitive level, even when the controlled price is set below that which would have prevailed in the absence both of control and of imperfect competition.

II

The foregoing analysis, both verbal and diagrammatic, has proceeded under certain suppositions, none of which is borne out precisely in cur-

[3] In the real world, the problem is complicated by the artificial creation of scarcities by producers anticipating or hoping to induce decontrol of their products, or possibly an increase in OP. These contrived scarcities and producer "strikes," restrained during the war by considerations of patriotism, appear to have been the basic factor in the apopletic demise of OPA's main body in October and November, 1946. The scarcity (or strike) case does not formally invalidate the argument in the text, for its effect is to tilt MC upwards (temporarily) to a vertical line, thereby forcing a (temporary) increase in OP'' which in turn brings on a fringe AA if OP is held constant.

rent industrial practice. Producers, we have supposed, seek to maximize current profits. They expect control to continue through at least the short-run future, or at the very least they consider it unassailable by any "sit-down strikes" or withholding tactics which they may adopt. Consumer demand at and below the controlled price is unaffected by the imposition or withdrawal of control, or by the level at which the controlling authorities set the controlled price. (This complex of assump-

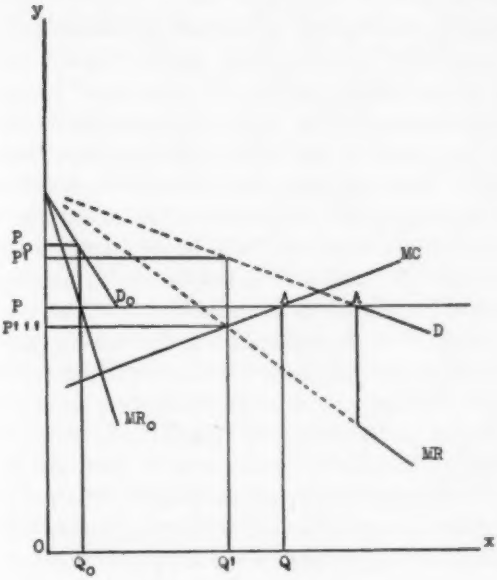


FIGURE 3

tions will be retained throughout the present paper.) Another implicit postulate has been perfect enforcement and the absence of black markets. This can be dropped at relatively slight cost in the difficulty of the exposition and of its diagrammatics.

A black market becomes a possibility whenever there exists a fringe of unsatisfied demand at the fixed price OP, such as AA in Figure 2. Under our assumptions, this implies OP set below the competitive price OP''. If there is a black market in operation, the demand curve for black-market customers at prices above OP has as its maximum base a quantity equal to the fringe AA, and rises to the left of the upward extension of D.[4] It is labelled D_0 in Figure 3. The corresponding marginal

[4] If no unsatisfied buyers harbor scruples against black marketing or are prevented from informing themselves of black market conditions, D_0 may be expected to bear approximately the same relation to D extended upward from OP which AA bears to $(OQ+AA)$. (This approximation does not allow for special favors to unusually loyal or wealthy customers, which would concentrate AA among the impoverished and the mobile.) The percentage by which D_0

revenue curve, likewise lying to the left of MR, is labelled MR_0. The producer, maximizing his profits in accordance with the general principles of price discrimination, equalizes marginal cost simultaneously at OP with marginal revenue in both white and black markets. The resulting output is OQ, of which OQ_0 is sold on the black market at a price OP_0 which will usually exceed (as here) the uncontrolled imperfectly competitive price OP', to say nothing of the hypothetical "competitive" price OP''.[5]

A simple relation can be set up on neutral assumptions between the black-market and the uncontrolled prices—apart from uncertainty premiums, to be discussed below. If consumers have no repugnance against black marketing, if the index of reprehensibility is the same at all black-market prices, D_0 and MR_0 will be proper fractions of D and MR respectively. They will then have identical elasticities at all prices, and will yield the same price results for equal marginal revenues. Under these circumstances, OP_0 and OP' will be equal when the corresponding marginal revenues, OP and OP''', respectively, are equal. This result can be generalized into a set of inequalities, so that we have $OP_0 \gtreqless OP'$ according as $OP \gtreqless OP'''$. If repugnance factors operate in some such manner as was suggested in footnote 4, D_0 will be rendered less elastic than D, and OP_0 will be raised sufficiently to prevent $OP \leqq OP'''$ from serving as sufficient condition for $OP_0 \leqq OP'$. On the other hand, if the unsatisfied fringe of demand is concentrated upon the impoverished and the disloyal, as was suggested parenthetically in the same footnote, D_0 will tend to be more elastic than D. The upper branch of the inequality, or $OP \geqq OP'''$, will no longer suffice for $OP_0 \geqq OP'$. These two tendencies should operate against each other in practice—hence the reference to "neutral assumptions."

Producers on their part are supposed devoid of scruples against black marketing.[6] Nevertheless, if they must add an incremental premium for uncertainty to their black-market costs, as is normally the case when enforcement is attempted, a differential must be added to their black-market costs. This differential between black and white markets is taken

at any black-market price falls short of the corresponding value of $[AA/(OQ+AA)]D$ may be taken as an index of reprehensibility, or inadequate information, attached to black marketing at that price. If, as this writer suspects, this "index of reprehensibility" falls as the black-market price rises, D_0 is consistently less elastic than D extended.

[5] So strong was the public expectation (fostered by opponents of price control) of $OP' < OP_0$ by the operation of virtual economic law, that it became front page news when meat prices rose above previous black market levels during the temporary decontrol in the summer of 1946. *Cf. Chicago Sun*, July 12, 1946, p. 1.

[6] On the unsolved problem of the inter-relationships between law observance and profit-maximization, with special reference to black marketing, see a trenchant but inconclusive paragraph by Fritz Machlup, "Marginal Analysis and Empirical Research," *Am. Econ. Rev.*, Vol. XXXVI, No. 4, Pt. 1 (Sept., 1946), p. 547, n. 11.

into account by lowering of the black-market demand curve D_0 by the amount of the added uncertainty premium. A black-market price OP_0 derived from a diagram such as Figure 3 must be raised in conformity with this premium.

Total output OQ continues to exceed OQ' whenever it would have done so in the absence of a black market.[7] It is now necessary, however, to divide OQ into two parts, of which OQ_0 is sold on the black market and Q_0Q is sold legitimately. This legitimate portion Q_0Q may readily fall short of the uncontrolled output OQ' even when OQ is substantially in excess of it. The less the fringe AA at the price OP, and the greater the public reluctance to deal on the black market, the greater is the probability that not only the total output OQ but its legitimate component Q_0Q will exceed the uncontrolled output OQ' as in Figure 3. These same circumstances, however—small and inelastic black-market demand—are, paradoxically, the conditions which lead to a high black-market price OP_0, well above both OP and the uncontrolled OP'.

Professor William H. Nicholls has proposed as more realistic a modified case in which the black market and legitimate supplies are provided by different and separate concerns. A large, established, generally low-cost firm produces only for the legitimate market; close supervision or company tradition keep it from illegal or disreputable association with the black market. Its output is then OQ, as in Figure 3. The unsatisfied fringe AA would be catered to on the black market by smaller, presumably new, higher-cost concerns whose combined marginal cost curve lies above MC. If the black market is supplied independently by new high-cost firms, output on both markets combined is higher than in the example illustrated, since the black market supply must be added to OQ rather than included in it. On the other hand, the black-market supply is lower and the black-market price higher, because of the cost differential.

Mr. J. K. Galbraith carries the argument somewhat further, on the basis of his wartime experience in price administration,[8] and suggests a substantial degree of incompatibility between certain forms of imperfect competition and any black marketing whatever. A dominant firm with a weather eye to unfavorable publicity tends rather to coöperate with the authorities by instituting informal or private rationing on its own. (Its opposition or recalcitrance, Galbraith does not state, will take

[7] This result supposes linearity of the black-market demand curve—another "neutral" assumption. For the completely general (curvilinear) case, in which price discrimination as between legitimate and black markets may increase or decrease total output depending upon the "adjusted concavity" of the black market demand curve, *cf.* Mrs. Robinson, *op. cit.*, pp. 188–95, esp. p. 190 ff.

[8] J. K. Galbraith, "Reflections on Price Control," *Quart. Jour. Econ.*, Vol. LX (Aug., 1946), pp. 475–89.

the form of a withholding campaign, at once more genteel, more effective, and more profitable in the long run than black-market operations would have been.) Furthermore, "It is obviously easier to police a few firms than many."[9] Price leadership, a frequent implement and accompaniment of industrial dominance, also operates to inhibit black marketing; when the initiative in price changes has come customarily from the selling side, the probability of illegal suggestions from buyers is decreased. Finally, prices have become "inflexible and even institutionalized" under imperfect competition, "it is relatively easy to fix prices that are already fixed!"[10]

III

Whenever a fringe of unsatisfied demand exists, whether due to a controlled price below its competitive level or to a producers' "strike"

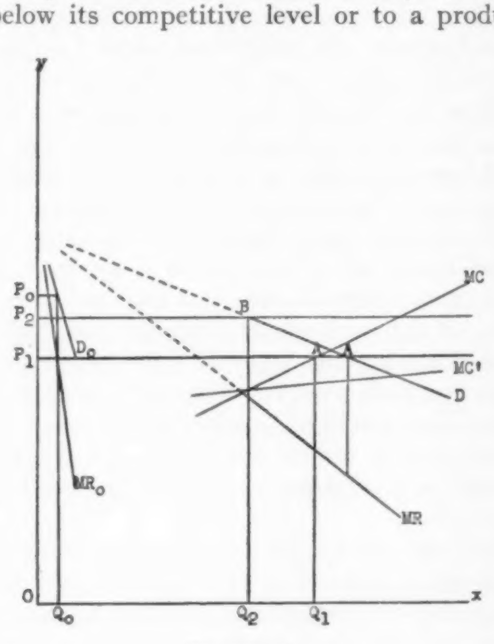


FIGURE 4

against some aspect of price control, the bulk of present discussion asserts that output will rise or fall indefinitely with the controlled price. These propositions are carelessly stated even against a background of upward-sloping competitive supply curves. Their unreliability under conditions of imperfect competition is readily demonstrable, not only

[9] *Ibid.*, p. 481.
[10] *Ibid.*, p. 483.

when the scarcity is induced artificially, but in two additional types of cases.

Let the controlled price (in Figure 4) be raised from OP_1 to OP_2. Production will fall off nevertheless from OQ_1 to OQ_2. This effect is quite general whenever the marginal cost curve MC cuts the price line at P_1 to the right of the point B which marks the discontinuity in marginal revenue under the higher price line at P_2. It will also obtain when some such marginal cost curve as MC' (in Figure 4) crosses both marginal revenue discontinuities before cutting either price line. In the second case, though not the first, a further cut below OP_1 would have increased output further.

Both of these cases are illustrated in Figure 4. The economic meaning of the first is simple. It is the old story of goose and golden eggs. The power of price increases to evoke saleable output is limited. Too large an increase is worse than none at all. The illustration shows an overdose, an increase not only above the competitive level but sufficiently far above it to cut production through simple limitation of demand. A smaller increase, all or part way to the "competitive" price (indicated by the intersection of D and MC) would have produced the desired output increase above OQ_1. In the second case, we have a highly elastic (near-horizontal) cost curve MC'. (This I have called a "Reuther" cost curve, for reasons to be clarified in the last section of this paper.) Any fringe of unsatisfied demand at either the old price or the new one is due to producer pressure against price control, and any black market is due to the same factor.

Neither of these cases, in which output falls despite a rise in price, can be considered typical or convincing for purposes of political argument. In Case 1 (costs following MC) there is a shift from a situation with a fringe of unsatisfied demand (AA) to one without it. A black market is eliminated. The output decrease (Q_1Q_2) is balanced at least in part by the transfer of OQ_0 units from black-market sale at OP_0 (presumed substantially above OP_2 as shown) to legitimate channels. Producer interests are also quick to deny any intention to force prices above their "competitive" level, even in industries characterized in fact by serious imperfections of competition. In Case 2 (costs following MC'), there is no black-market problem at either price, an unusual circumstance in itself, and no consumer pressure is added to producer demands for "price relief"—abstracting from deliberate withdrawal of goods by producer interests.

A more representative example is drawn as Figure 5. Here demand remains unsatisfied even at the higher price, for both OP_1 and OP_2 lie below the competitive level. Here production must rise with price—OQ_2 must exceed OQ_1. There remains, as has been said, a fringe of un-

satisfied demand even at OP_2, though its size is reduced from AA to BB. Completely new black-market demand and marginal revenue curves must be drawn to correspond with the changed prices situation. These are labelled D_{02} and MR_{02}, to distinguish them from D_{01} and MR_{01}, of the earlier situation. (Maximum black-market demand is now BB at OP_2 instead of AA at OP_1.) The new black-market price and quantity OP_{02} and OQ_{02} are respectively higher and lower than they had been before. The price result, which seems general enough though not strictly

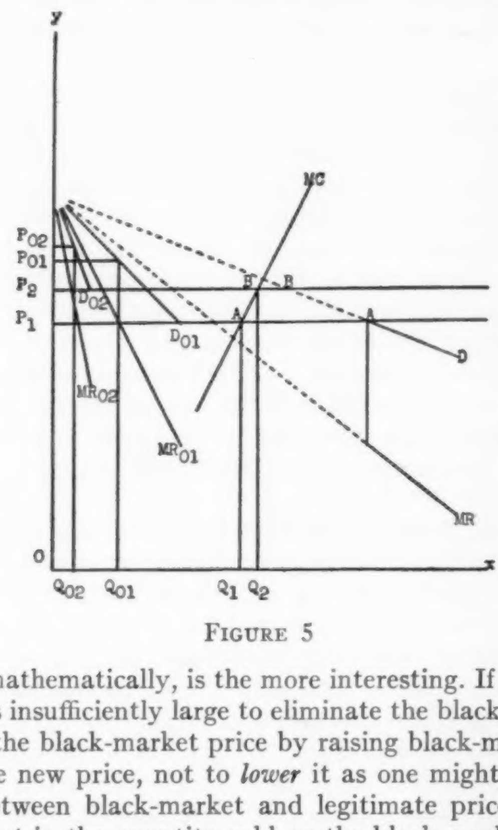


FIGURE 5

determinate mathematically, is the more interesting. If a rise in a controlled price is insufficiently large to eliminate the black market, it will tend to *raise* the black-market price by raising black-market marginal revenue to the new price, not to *lower* it as one might suppose. (The differential between black-market and legitimate prices will be narrowed.) The cut in the quantity sold on the black market is in accord with expectations, and provides a supplementary addition to the in-increased output marketed legitimately. The primary increase comes, of course, from the additional production evoked by the price rise.

The price controllers' own answer to proposals to induce further production by granting price increases involves the notorious inclusion of the price of (producer good) A in the cost of (consumer good) B. If the price of A is increased, production of B is allegedly impaired by higher costs unless a more than countervailing price rise is granted. Respect can be paid this viewpoint by indicating that any rise in any MC curve

(all MC curves have been held constant thus far *ex hypothesi*) will serve to lessen any increases in production and magnify any decreases consequent upon upward movements of controlled prices. The process of proliferation of price changes operates under controlled imperfect essentially as under controlled pure competition. As will be seen in the next section, however, increases in marginal cost do not necessarily require increases in controlled prices; the basic argument of this paragraph is not watertight.

IV

We have seen in the last section that an increase in a controlled price under imperfect competition with unchanging cost conditions may reduce output (and employment) instead of raising it, and *vice versa*. A companion case is more important, where increased costs, following, *e.g.*, a wage increase, operate to increase output and employment at a constant controlled price rather than decreasing it. I am not referring here to the elimination of monopsony by union organization, where the possibility has become well known.[11] Reference is made rather to industries already highly organized, where some such argument as will be presented seems to have underlain the CIO "52-for-40 or Fight" wage-increase proposals of 1945–46. I am accordingly calling the special conditions required the "Reuther assumptions," and using the name of the UAW leader who provided the drive's intellectual leadership, completely without authorization from Mr. Walter Reuther himself.[12]

The CIO policy aimed at maintaining the level of total consumer demand through the reconversion period, and eventually increasing it, by raising basic wage rates simultaneously in several basic industries—steel, meat-packing, automobiles, agricultural and electrical machinery, maritime transport. The increase was to be sufficient to maintain take-home pay despite resumption of normal peacetime hours and despite postwar downgrading both between and within industries.

Wage increases generally operate to increase direct and marginal costs all along the line. This effect is shown on Figure 6, where MC_1 indicates the cost situation prior to a wage increase, and MC_2 the subsequent situation. The increased wages throughout the economy were to main-

[11] My own development of this argument can be found in an article, "The Economics of Collective Bargaining," *Quart. Jour. Econ.*, Vol. LIII (Aug., 1939), especially pp. 538–43. (The presentation suffers from considerable naïveté as to the quantity the unions seek to maximize, and from a persistent technical error in labelling productivity curves as though they were demand curves even in monopsonistic situations.) This article relies heavily in turn upon Mrs. Robinson, *op. cit.*, Chaps. 24, 26.

[12] The arguments involved have been formalized and developed further in connection with the "second round" of wage increases sought in 1946–47, particularly in the so-called "Nathan Report." (Robert R. Nathan and Oscar Gass, *A National Wage Policy for 1947* [Washington, 1946], pp. 11–14.) The discussion which follows was largely worked out by my wife, Mrs. Jean Andrus Bronfenbrenner, also without benefit of authorization by Mr. Reuther or Mr. Nathan.

tain demand for the firm's product at D_1 and output at OQ_1, while the OPA was to keep the controlled price at OP. Following the demobilization of the armed forces, demand was expected to increase to D_2, which would in turn increase output to OQ_2 and provide additional employment for returning servicemen. Prices would remain at OP. No rationing would be required to satisfy demand. The firm would earn normal profits, though the profit per unit would be less than before the wage increase.

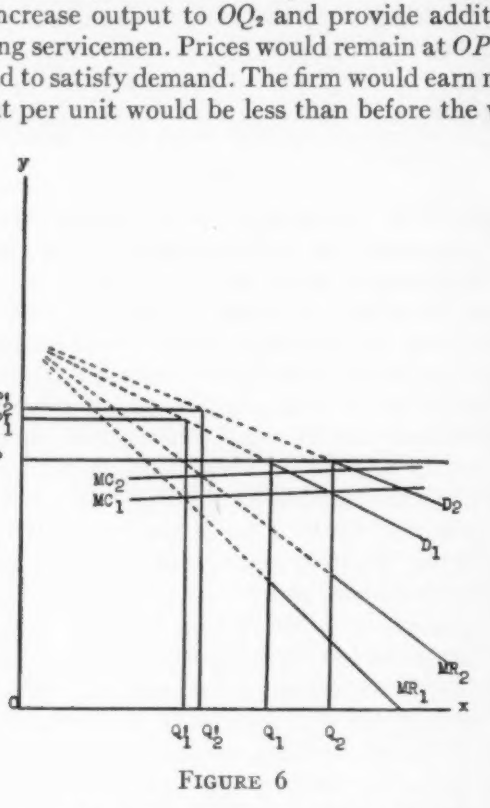


FIGURE 6

The final solution would be more desirable from labor's point of view, as regards high employment, high wages, and low prices, than that which would have obtained at the previous wage level or in the absence of control.

As drawn, Figure 6 includes the first two of the three special assumptions required for this idyllic and optimal outcome, from the CIO point of view. Dispute regarding their realism has not abated, either within or without governmental circles, despite the Administration's official shift from admission to denial.

(1) Both marginal cost curves MC_1 and MC_2 are approximately horizontal or else decreasing in the relevant range.[13] They cut both MR_1 and MR_2 at or below their discontinuities at OP. Curves of this type I have

[13] Galbraith, *op. cit.*, pp. 485–87, believes that the bulk of wartime expansion in imperfectly competitive non-agricultural industries was obtained under conditions of decreasing or approximately constant cost.

labelled "Reuther" cost curves and utilized in connection with the argument of the previous section. Their pertinence is implied by such statements as those of Henry Ford II, to the effect that production below pre-war capacity has led to substantial losses because of high overhead. On the other hand, material shortages cause marginal cost curves to approach instead the precipitous vertical of complete inelasticity.

(2) The firm's product is consumed largely by working people out of current income. The maintenance or increase of demand can be considered largely a function of payrolls in basic industry, though not of payrolls of the producing firm itself.

(3) Average cost remains below OP for output OQ_2 at the later wage level. Mr. Reuther's "Look at the Books" demand was aimed at this point.

If the first of the three conditions above is not satisfied at least as to MC_1, MC_1 will cut OP to the left of OQ_1, and a fall in the firm's output and employment is a necessary consequence of a rise in wages without price relief. If the condition is satisfied for MC_1, but not for MC_2, production will increase with demand so long as MC_2 cuts OP to the right of OQ_1. Non-satisfaction of condition (2) is a rebuttal to the argument for increased wages, not a positive argument against them. If condition (2) is not fulfilled, wage increases will generate no increased demand for output at the controlled price, but no actual decrease is indicated. As for condition (3), if this is not fulfilled wages cannot be increased in practice without price relief, even though the producer has sufficient resources to continue in business for some time with subnormal profits or even actual losses.

As has been said, the applicability of this trio of assumptions to the 1945–47 situation can be challenged. To this writer, all three assumptions conflict somewhat with fact for at least a minority of imperfectly competitive American firms. Shortages and scarcities interfere with condition (1) in the short run at least. Condition (2) seems dubious in view of the accumulation of unspent war savings by business firms and final consumers. The case for condition (3) rests with undue exclusiveness on *estimates* of *overall* profit figures whose high levels are probably only temporary. It is nevertheless true, and is in fact the point to be stressed, that the Reuther program involves no theoretical contradictions or fallacies. A rational economic case can be made for it under particular fact-situations; the factual conditions for its applicability are perfectly conceivable in circumstances past and future if not present.

The drastic nature of the Reuther program should not be discounted by any demonstration of its possible economic rationality (freedom from contradiction) or yet of its possible economic feasibility (under price control). For it can be shown that even when all three of the above conditions hold in practice, price controls or other special devices are re-

quired to maintain output and employment and restrain price advances in the face of a wage increase.

Industrial unionists do not constitute the sole market for any industrial products. It is therefore foolhardy to expect demand for any firm's products to rise generally by the same proportion as industrial wage rates generally, let alone its own rates (marginal costs). We should rather presume some multiplier substantially less than unity even if finitely greater than zero.[14] The expected effect on an uncontrolled firm of a cost increase incompletely compensated by a demand shift is a fall in output and employment and an eventual rise in price whether its industry be perfectly or imperfectly competitive.

In the absence of price control, the wage increase would operate to raise output from OQ'_1 to OQ'_2 on Figure 6 and price from OP'_1 to OP'_2, after the increased demand took effect. Both prices are shown as higher, both outputs as lower, than under the controlled situation, results not accidental but required by the first condition for the applicability of the Reuther analysis. The increase in the uncontrolled price is the expected result. The increase in the uncontrolled output is not, but results rather from the elasticity of the cost curves and from a somewhat dubious implicit assumption regarding the process of dynamic adjustment to the wage increase. (Both output and price are supposed maintained at the levels of the initial situation until the increased demand of the subsequent one takes effect to alter them.)[15]

The significant conclusion here, which does not depend on the diagrammatic minutiae of Figure 6, is that even under circumstances which assure optimal output and employment effects under controlled prices, wage increases will lead firms to increase their prices in a free economy, whether their positions be atomistically or imperfectly competitive. The Reuther program expects prices to remain stable, and wage increases to be financed from profits in so far as they are not self-sustaining by reason of increased demand. Some form of continuous control over price must, therefore, be an integral part of the plan. This control need not be operated by a governmental agency of the OPA type. Unionists would prefer a labor "voice in the management" which would forestall maximization of profits by the producing firm, acting in the interest of employees and presumably also of consumers. To which alternatives the coöperator would add control by the consumers themselves, apparently not considered in the original Reuther plan.

[14] M. W. Reder has developed a diagrammatic technique for dealing with these and allied problems. Compare the "company town" example in his essay "Inter-Temporal Relations of Demand and Supply within the Firm," *Canadian Jour. Econ. and Pol. Sci.*, Vol. VII (Feb., 1941), pp. 30–32.

[15] The eventual outcome of the conventional dynamic adjustment, which proceeds from an initial combination of MC_2 and MR_1, would undoubtedly eventuate in output below OQ'_1, due to its abortive effect on any increase in demand. Its comparative price effects seem indeterminate in the general case.

GERMAN FINANCE IN WORLD WAR II

By Richard W. Lindholm*

Comparative Analysis of German Fiscal Policy

The procedures used by Germany to finance World War II cannot be considered unusual with the exception, perhaps, of taxes levied on conquered people. In fact, the methods employed by Germany are sufficiently similar in many respects to those used by Great Britain and the United States that comparison of the results obtained amounts to an examination of the relative efficiency with which each nation employed the same fiscal tools. This study except for a very cursory examination of the broadest aspects of the financing of the war in Great Britain and the United States will concern itself with an examination of the manner in which Germany tapped the conventional sources of governmental revenue and the flow of funds which she obtained. Also, attention will be paid to: (1) the indications of wartime economic conditions inside Germany which are shown by revenue receipts, and (2) the relative importance of occupation charges assessed by the Nazis.

Table I below summarizes the World War II expenditures and taxes of Germany, Great Britain and the United States. The years selected as comparable were determined upon the basis of wholesale prices and tax receipts. The earlier year is the fiscal year which witnessed the jump in wholesale prices prior to the inauguration of rigid price controls and the later year is when each of the three nations had completed the transfer to a total war economy.[1]

It is worthy of mention that the United States entered the total war period paying a smaller portion of her expenditures from tax receipts than did Germany. With the complete establishment of the war economy, however, the portion of total United States expenses paid with taxes became comparable with that paid in Germany in 1939 and re-

* The author is assistant professor of economics at Ohio State University.

[1] The data regarding German finances not supported by further source reference were obtained by the writer from the files of the Statistisches Reichsamt in August and July of 1945. The Statistisches Reichsamt is in the Russian section of Berlin and is not available to Americans for economic research. It is believed vital portions of the data have now been removed from Berlin. The writer was given invaluable aid by the following economists of Berlin: Professor Merwarth, Dr. Ferdinand Hotte, and Dr. Hans Schultz. Dr. Karl Heinrich Knappstein of Frankfurt am Main gave valuable interpretive assistance.

mained comparable with Great Britain.[2] Also, when completely mobilized, the United States war effort was about twenty-five per cent greater than the combined achievements of Germany and Great Britain.

Total war meant different things to the populations in the three nations. In all three countries however, it was the extent to which the government could, or did, induce the population to support the war effort. The varying completeness with which the efforts of the populations were included can be visualized rather accurately by comparing central government expenditures with estimates of national income. Such a comparison is included in Table I.[3]

TABLE I.—COMPARATIVE FINANCE DATA OF GERMANY, GREAT BRITAIN, AND UNITED STATES FOR THE FISCAL YEARS INDICATED IN THE BODY OF THE TABLE (in millions of dollars)[a]

Item	Germany	Great Britain	United States
Expenditures of central government	*1939*—21,200	*1940*—15,883	*1942*— 32,491
	1942—51,200	*1944*—24,252	*1945*—100,397
Per cent of increase	141	53	209
Receipts of central government	*1939*— 9,440	*1940*— 5,981	*1942*— 12,799
	1942—16,160	*1944*—12,952	*1945*— 47,740
Per cent of increase	71	119	273
Per cent receipts of total expenditure	*1939*—45.4	*1940*—38	*1942*—39
	1942—31.6	*1944*—53	*1945*—46
National income	*1939*—36,000	*1940*—23,780	*1942*—107.7
	1942—40,000	*1944*—33,336	*1945*—156.9
Per cent of increase	11	40	46
Per cent receipts of national income	*1939*—26	*1940*—24	*1942*—12
	1942—40	*1944*—39	*1945*—29

[a] Throughout this study pounds have been valued at $4.00 and marks at 40 cents.

Source: German: *Statistische Jahrbuch 1941–1942*, p. 605, national income 1939. Other German data, Statistisches Reichsamt, August, 1945. Great Britain: *Statesman Year Book 1945*, p. 37, expenditure and tax data; *Statistical Year Book of the League of Nations* 1942/44, pp. 282, 287, national income data. United States: *Treasury Bulletin*, Sept. 1946, p. 6 receipt and expenditure data; *Survey of Current Business*, March 1943, p. 21 and February 1946, p. 7, national income data. U. S. national income data adjusted on basis of average monthly expenditures.

The necessity of using similar data for the three nations has required

[2] Tax collections by local governmental units are much greater in the United States than in either Great Britain or Germany. For example, in 1941 tax collections of local governmental units amounted to 7.9 billion dollars in the United States, in Great Britain .9 billion dollars. Thus, tax collections of the various national governments are not entirely comparable.

[3] German war expenditures include conquered-area receipts which do not appear to have become a part of the German national income total.

the use of national income data and has in addition dictated that the comparisons be made on a fiscal year basis. Warning is given again that national income data of different nations are only roughly comparable under normal conditions and under war conditions this degree of comparability is considerably reduced.

The taxes collected from the German people in 1942 were a smaller percentage of the national income than ever became the case in either Great Britain or the United States. The portion of national income collected in taxes in Germany at the beginning of hostilities was roughly equal to the highest point reached by the United States.[4]

During the periods selected for comparison British central government expenditures rose by 53 per cent and national income by 40 per cent while in the United States expenditures by central government increased by 209 per cent but national income by only about 46 per cent. Thus, the national income increases of the two nations were approximately the same but the United States was able to extract a fourfold greater increase in central government expenditures than was Great Britain. The stituation in Germany was similar to that existing in the United States. Germany increased central government expenses by 146 per cent while national income increased by only 11 per cent. Reduction of local government expenditures and sharp curtailment of civilian durable consumer goods production made this achievement possible in the United States; tributes from conquered nations and also reduction in consumer goods production made it possible in Germany.

German Taxes and Tax Collections

Data regarding the methods used by the Germans to finance their tremendous military operations have been meager and, at the most, cursory in nature. It was very difficult if not impossible to obtain accurate information regarding tax receipts of the Reich during the period of her rearmament and, of course, also during the war phase.[5] The best available data are summarized in Table II. Some of the particular tax receipt trends are interesting in themselves.

The receipts from the personal income tax more than doubled from 1938 to 1943. This tax, which brought in only 5.4 billion marks in 1938, the peak of the rearmament period, was made to yield 13.4 billion marks in 1943. This is an increase of about 148 per cent in personal income tax receipts. During the same period Reich tax receipts rose from 17.8 bil-

[4] German wholesale prices 1939–1942 increased 8%, from *14th Annual Report of Bank for International Settlements*, p. 74. United Kingdom wholesale prices, 1940–44, increased 33%, *ibid.*, p. 84. The BLS wholesale price index increased 7.8% from 1942 to 1945.

[5] Otto Nathan has given Reich tax receipts for 1932–38 on p. 320 in *The Nazi Economic System* (1944).

TABLE II.—VARIOUS GERMAN TAXES AND RECEIPTS FOR THE FISCAL YEARS BEGINNING APRIL 1, 1938–1944

Types of Tax[a]	Total Receipts (billion marks)						
	1938	1939	1940	1941	1942	1943	1944
1. Tax upon income (a+b+c+tax upon returns upon investment)	5.4	8.2	10.7	13.1	12.7	13.4	
a) Tax upon wages (retained before paying)	2.1	2.7	3.0	4.2	4.3	5.0	
b) Assessed income tax	3.2	4.4	5.1	8.8	8.2	8.2	
c) Additional war tax upon income (only 1939–40)		1.1	2.5				
2. Corporation tax	2.4	3.2	3.5	5.1	6.9	6.7	
3. Tax upon property	0.4	0.4	0.6	0.6	0.7	0.7	
4. Turnover tax	3.4	3.7	3.9	4.2	4.2	4.2	
5. Taxes upon stock exchange	0.5	0.5	0.5	0.5	0.5	0.4	
6. Taxes on transport	0.5	0.5	0.5	0.6	0.7	0.8	
7. Total income and business taxes[b] (1–6)	13.1	18.7	21.1	25.0	27.6	27.8	
8. Tobacco tax	1.0	1.2	1.6	1.6	1.5	1.3	
9. Beer tax	0.4	0.5	0.5	0.7	0.7	0.3	
10. Additional war tax upon retail price of tobacco and beer		0.8	1.6	2.2	2.7	2.6	2.0
11. Sugar tax	0.4	0.5	0.5	0.6	0.5	0.6	
12. Customs duties	1.8	1.7	1.4	1.1	1.8	0.6	
13. Total excise taxes and customs[c] (8-12)	4.7	6.1	7.0	7.3	6.8	6.6	
14. Total tax receipts (net)	17.8	24.8	28.1	32.3	34.4	34.4	31.0[d]
15. War contribution (states, provinces, communities, etc.)		0.8	1.4	1.4	1.7	1.7	2.5
16. Redemption of real estate tax (raised because of currency inflation and tax on trade 1943–1944[e])					8.0	3.7	3.3
17. Total tax receipts[f]	17.8	25.6	29.5	33.7	44.1	39.8	36.8

[a] Totals include only the taxes collected from areas which were a part of the Reich prior to April 1, 1938; Austrian tax receipts included for the period 1939–44.

[b] The amount which item 7 exceeds the sum of items 1 through 6 is the sum collected from the miscellaneous business taxes.

[c] The amount which item 13 exceeds the sum of items 8 through 12 is the amount collected from miscellaneous excise taxes.

[d] Breakdown not available.

[e] The amount included under item 15 represents largely the return to the Reich by local governmental units of their quotas of various taxes. This, of course, results in double counting. The redemption of the tax on real estate was assessed by the states, and the tax on trade was assessed by the communities.

[f] Statistics on tax yields taken from Ostrow's "Preliminary Study of German Government Finance," pp. 197–199. Vol. I of *Preliminary Report on Selected Financial Laws. Decrees and Regulations* by Clifford J. Hynning of the U.S. Treasury. Data are for fiscal years 1938, 1939, 1940.

Source: See footnote 1 and Table I source.

lion marks, to 34.4 billion marks, an increase of 93 per cent. The elasticity of the German personal income tax proved to be considerable. In fact it provided the Reich tax system with the required responsiveness.

The corporation and personal income taxes totaled 7.8 billion marks in 1938, a year in which the total Reich tax receipts equalled 17.8 billion marks. Thus in 1939, 10 billion marks were raised in taxes from sources other than the corporation and personal income tax. In 1943, corporation and personal income taxes equalled 20.1 billion marks and total tax revenues 34.4 billion marks. This was a yield from other tax sources of 14.3 billion marks, and an increase of 43 per cent over that of the prewar 1938 figure, as compared with an increase for the same period of 148 per cent in income tax receipts.

The greater stability of the Reich tax sources other than corporation and personal income taxes was to be expected. It was not expected, however, that revenue receipts arising largely from the sale of goods and services would be maintained after the strict rationing had been put into effect and after considerable damage had been inflicted on many of the Reich's principal cities.

The increase in the revenue received from these other taxes (other than income and corporation taxes) arose largely from rising revenues from the turnover tax and from the increased taxes on tobacco and beer. Customs duties, of course, showed a marked decrease. The downward trend in customs receipts continued steadily from 1938 to 1944, falling from 1.8 billion marks in 1938 to .6 billion marks in 1943.

The Nazi government during the progress of the war developed very few additional sources of revenue. One new source of revenue was the contributions made by states, provinces, associations of communities and communities to the Nazi central government from funds raised from local taxes and voluntary citizen contributions. These are extraordinary revenues and, being to a certain extent Reich obligations to repay, were not included in the above analysis. An additional source of funds to the Reich which became available in 1942 and continued to the end of the war was the redemption of the tax on real estate (capitalization of house rent tax).[6] After the inflation of World War I the German government levied a tax upon persons who had paid off the mortgages on their homes by the use of the highly inflated mark. In 1942 the Nazi government capitalized this annual income which again permitted the repayment of these mortgages in inflated money. This action brought in 8 billion marks in 1942 and 3.7 billion marks in 1943 and 3.3 billion marks in 1944. This revenue arose to a certain extent as the result of the sale of an asset and is not a tax revenue in the ordinary sense although the original ac-

[6] The 1943 and 1944 figures also included return to the Reich of the local tax on trade.

tion of the German government in fixing these new liabilities after the World War I inflation was similar in some respects to a tax which various countries have levied at times and called by different names, sometimes an "unjust enrichment tax."

The turnover tax (general sales tax) rates remained the same throughout the period 1938–44. The receipts from this tax may, therefore, be used as a basis for estimating economic activity inside Germany.[7] However, economic analyses based on 1944 German tax data are impossible for no attempt was made to reassess taxes and taxpayers were merely held liable for the tax which they paid in 1943.

In retrospect the most interesting economic analysis afforded by these tax data is the degree to which they indicate Germany's success in controlling the inflationary pressures of war. Briefly this is best accomplished by comparing tax collections of 1940 and 1943, which indicate wage and retail purchase data. The tax rates for these two years were practically the same but the economy of the Reich had changed from one able to provide its citizens with an abundance of the necessities of life to one that was having difficulty maintaining the requirements basic to a going economy.

The portion of the German personal income tax which is withheld (for the purpose of this discussion it can be considered a tax of uniform rate upon wages) increased from 3.0 billion marks in 1940 to 5.0 billion marks in 1943. The rate of deduction is estimated to have risen very little with the increase in gross weekly earnings—perhaps from 14 per cent to 15 per cent.[8] Moreover, the number of persons employed did not increase greatly from 1940 to 1943. Portions of the native German labor force taken into the army were largely replaced with foreign labor who were also subject to the wage tax. The higher wage tax rate applicable to Eastern workers (Poles and Russians) was roughly counterbalanced by the lower wages paid these laborers.[9] Because of these relationships the increase of 66 per cent is significant and certainly indicates that even a dictatorship finds it impossible "to follow a hold-the-line wage policy."

During the same period that the receipts of taxes on wages were showing such a substantial increase, the total of the various German excise

[7] Briefly the turnover tax was 2 per cent upon all sales of goods and professional services. The tax was paid at each step of production. It was not, however, paid by the wholesaler. Imports and exports were exempt as were the wholesale exchanges of raw materials such as cotton, fuel, gasoline, milk, etc. House rent, water, gas, electricity, and heat were also exempt. The rate was only 1 per cent in the case of the sale of agricultural products. The rate was increased to 2½ per cent if the sales of a single firm during the previous year were greater than 1,000,000 marks. The tax is payable quarterly. See *Business Week*, September 20, 1941, p. 80.

[8] *Exploitation of Foreign Labor by Germany*, Study Series C, No. 25 (Internat. Lab. Office, 1945).

[9] *Ibid.*, pp. 55, 61–64, 118–20.

tax receipts was decreasing from 7 billion marks to 6.6 billion marks. The receipts from these two taxes provide a fairly accurate indication of what was going on inside Germany. Money was increasing in abundance while consumable goods were decreasing but because of strict German price control this situation did not develop into a rapid price rise.[10] The excess funds available to German workers went into the numerous German savings institutions who in turn made the funds available to the ever-hungry German war machine.

German Budgetary Items

The budget of the Reich for the years 1938 through 1944 is given in Table III. This abbreviated German budget provides the basic data needed to understand the way in which Germany financed the war.

TABLE III.—GERMAN BUDGETARY ITEMS FOR THE FISCAL YEARS BEGINNING APRIL 1, 1938–44
(in billions of marks)

Receipts and Expenditures	1938	1939	1940	1941	1942	1943	1944
1. Total tax receipts	17.8	25.6	29.5	33.7	44.1	39.8	36.8
2. Less quotas to states	2.0	2.0	1.9	3.0	3.7	7.9	8.3
3. Net tax receipts	15.8	23.6	27.6	30.7	40.4	31.9	28.5
4. Borrowings	3.0	11.8	21.4	41.7	56.1	60.1	79.7
5. Total internal government receipts	18.8	35.4	49.0	72.4	96.5	92.0	108.2
6. Ordinary expenditures	16.5	28.8	18.5	19.0	19.0	21.6	21.9
7. War expenditures	00.0	20.0	54.0	76.0	101.0	123.0	140.0
8. Interest on public debt	1.3	1.9	2.8	4.2	5.9	6.6	11.4
9 Amortization of debt	1.0	1.3	1.7	1.8	2.1	1.8	2.7
10. Total expenditures	18.8	52.0	77.0	101.0	128.0	153.0	176.0
11. Amounts obtained from conquered nations and secret borrowing. (Item 10 minus item 5)	00.0	16.6	28.0	28.6	31.5	61.0	67.8

Source: See footnote 1 and Table I source.

The tax receipt figure as given in Table II must be reduced by the grants made by the German central government to the states, to arrive

[10] Kuczynski, R. R., writing from Berlin in 1923 states that from 1914 to 1918 the German government raised 18.2 billion marks by taxation and borrowed 98.2 billion marks of funded debt. There was an additional floating debt of 48 billion marks. Therefore, of the total expenditures of the German government during the 1914–18 period (164.4 billion marks), only a little over ten per cent was obtained from taxes. *Journal of Political Economy*, Vol. 31 (1923), pp. 781–83.

at a net tax receipt figure. To this is then added fiscal year additions to the debt of the German central government to arrive at a total of central government internal receipts. The proportion of total expenditures which were financed by tax receipts is obtained by dividing item 3 by 10 of Table III, with the following result:

	1938	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*
Per cent	84.0	45.4	35.8	30.4	31.6	20.9	16.2

War expenditures increased continually from the beginning of hostilities until final defeat. Over four times as many marks were spent to fight the losing battles of 1944 as were spent to equip the Reich war machine and win the great victories of 1939.[11] The greatest relative increase of war expenditures came in 1939 and 1940. The increase experienced between 1943 and 1944 is the smallest of the war period. Even at that late date, however, when it would be expected that Germany was completely mobilized for war, there was an increase of 17 billion marks or about 13 per cent.

The final annual total of German war expenditures of 140 billion marks (56 billion dollars) meant a *per capita* expenditure of approximately 1,750 marks ($700, population 80,000,000) which represented an enormous effort.[12] However, the importation of large quantities of slave occupation labor and collections from conquered nations destroy any meaning which might be possessed by a *per capita* comparison of the German effort with that of the United States or Great Britain.[13]

The ordinary expenses of the German government increased greatly from 1938 to 1939 (war expenditures were undoubtedly included as ordinary expenditures) and then showed a sharp decline, though they never again reached the low of 1938.[14] The gradual rise of ordinary expenditures indicated in 1943 and 1944 represented the increase in the German cost of living and the additional expense arising from the use of inexperienced help. The rapid increase in the quotas granted to the states are expenditures required to aid the local governments in bombed-out areas and are therefore indirect war costs.[15]

[11] Estimated that 12.3 billion marks of the greatly increased ordinary expenditures of 1939 were actually war expenditures. Estimate based on assumption that ordinary expenditures in 1939 were the same as of 1938.

[12] Total German war expenditures were 514 billion marks plus about 12 billion marks for a total of 526 billion marks (210.4 billion dollars) for the period 1939–44.

[13] By the end of 1942 foreign workers (including prisoners of war) represented 17 per cent of those employed in industry in Germany. *13th Annual Report of Bank for International Settlements* (1943), p. 7.

[14] Table III, item 6.

[15] Table III, item 2.

Funds Obtained from Foreign Areas

The comparison of the total internal receipts from taxation and borrowing with total expenditures, as shown in Table III, indicates a growing disparity throughout the war period. As a percentage of total governmental expenditures this difference, obtained by dividing item 11 by item 10 of Table III, is as follows:

	1938	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*
Per cent	00.0	31.9	36.4	28.3	24.6	39.9	38.5

It can be assumed with considerable confidence that, during the early

TABLE IV.—CLEARING FUND BALANCES AND OCCUPATION COSTS AS OF DECEMBER, 1944
(in millions of marks)

Nation	Clearing Fund Balances	Occupation Costs	Total
France	8,532	30,000	38,532
Belgium	5,411[a]	5,700	11,111
Netherlands	4,900	8,000	12,900
Denmark	2,670[b]	([e])	2,670
Hungary	804		804
Croatia	1,052		1,052
Bohemia and Moravia	500[c]		500
Slovakia	632		632
Norway		6,000	6,000
Greece		4,000	4,000
Rumania	1,126		1,126
Switzerland	686		686
Serbia	553		553
Italy	147		147
Bulgaria	1,500[d]		1,500
Spain	108		108
Others	73		73
Total	28,694	53,700[f]	82,394

[a] Estimated balance, nearly exclusively of direct investments of the Netherlands Central Note Bank in German securities.

[b] Includes 1,250 million marks for occupation costs.

[c] Estimated balance, nearly exclusively of direct investment of Central Bank in Reich securities.

[d] Estimated balance, nearly 50 per cent of which consists of treasury notes (Bulgarian treasury notes in terms of German marks) purchased by the Bulgarian National Bank for its balances.

[e] Already included in clearing balances.

[f] Incomplete.

Source: See footnote 1 and Table I source.

years of the war, the above percentages were the portion of total German central government expenditures which were met from payments received from conquered areas. This assumption can not be made with

such certainty for fiscal years 1943 and 1944. In fact, it is quite probable, for example, that a large portion of the 67.8 billion marks differential indicated in 1944 consisted of secret borrowing from German internal sources.

The subtraction of the total of clearing fund balances and occupation costs for Western Europe and the Balkans, given in Table IV, (82,394,000,000 marks) from the total of the differentials reported in Table III, item 11 (233,500,000,000 marks) provides an estimate of the amounts obtained from occupation exactions from Poland and Russia. This remainder (151,106,000,000 marks) should be deflated by an estimate of the amount of German government secret borrowing. As is indicated on p. 133 the writer would decrease this amount by about 93 billion marks, giving a net contribution by Eastern Europe of about 58 billion marks.

Though German data relating to the collections made from the conquered areas of Eastern Europe are not available, data are available regarding sums obtained from the Balkans and Western Europe. The statistics gathered by the Statistisches Reichsamt show that the amount collected in this manner amounted to over 82.4 billion marks by the end of 1944. France, Belgium, and the Netherlands contributed about three-fourths of this huge total.

The distribution of the clearing claims and the garrison charges by country for the period of the war is shown in Table IV. An interesting relationship shown by these data is the comparatively large contributions made by Belgium, Holland, Norway, and Greece. The total contribution made by these countries very nearly equals that of France.

These data can be considered inaccurate to the extent that Germany looted the countries occupied. Looting of the cruder type, actually taking the physical good, was particularly important in regard to all types of rolling stock; from small family automobiles to busses and railway locomotives. The data are also inaccurate to the extent that Germany was able to force the countries with which she traded to accept payments that would have had considerably less value upon a free market than that which was assigned by the German Ministry of Economics. The extent to which Germany obtained financial aid by resort to these practices, although considerable, will always be largely a matter of personal estimate.

An interesting feature of the clearing balances due the various countries is the seemingly small contribution which the Balkan satellites made to the nazi war machine. Another point worth noting is that Sweden's name is not included in the list of countries having clearing claims against Germany, nor is Finland's. These appear, however, to be the only countries within the German sphere of influence which were so fortunate. In the case of Luxemburg the country was included within

the Reich, so that clearing balances did not develop as a result of their mutual trade. This was also true of Sudetenland, Austria, Alsace Lorraine and a few other smaller areas.[16]

The total of 82.4 billion marks is a considerable sum which was largely paid over a five-year period. This contribution represented over 6 billion dollars a year, or, if it is assumed that the total amount was secured during the period 1940 through 1944, which is approximately true, it represented about 17 per cent of the total nazi war expenditures for those years.

The *per capita* wealth of France, Holland, and Belgium is fairly equal. The approximate *per capita* contributions of these three nations, however, varied considerably. The *per capita* assessment of France was $367, Belgium $536 and The Netherlands $560.[17] Norway, a much poorer nation, made a *per capita* contribution of approximately $800 for the support of German troops garrisoned there during the period of the occupation. These additional expenses were a considerable drain upon the slender resources of nations which had already been subjected to the ravages of modern war and in addition had had their international sources of wealth and income largely cut off.

German Debt

The total outstanding indebtedness of the Reich, omitting secret borrowing, rose from 30.9 billion marks on March 31, 1939, to 381.1 billion marks (152 billion dollars) on April 30, 1945. Interest costs at the end of the war amounted to 11.4 billion marks or about 40 per cent of 1944 net tax receipts of the German central government. This was a huge interest burden but represented an average interest rate of only three per cent. The methods used by the Nazis to obtain borrowed funds is summarized in Table V.

Secret Borrowing. In November of 1945 German fiscal experts estimated that 20 billion marks of secret borrowing was accomplished between December 31, 1944, and April 30, 1945, and this estimate is shown in Table V. They were, also, of the opinion that no secret borrowing took place prior to December 31, 1944. Recent data that have been received in Frankfurt by occupation authorities indicate a considerably higher total. Certainly nazi military and government leaders indulged in all types of immoderate fiscal practices during the last hectic days of

[16] Perhaps the greatest financial loss suffered by the citizens of Luxemburg was that the savings banks were forced to invest their accumulated deposits in German bonds which are now worthless. See the *Luxemburger Wort* during the month of October, 1944.

[17] The figures quoted by M. Robinson vary some from the above but not greatly. To quote, "Occupation costs and balance of trade was much greater in Holland, Belgium, and Norway than in France, amounting in Holland, for example, to about $700 as against $320 in France" *Quarterly Journal of Economics*, November, 1945, p. 15.

the war. It is believed that most of the secret borrowing arose through confidential arrangements made between the government and large savings institutions and great German industrial firms.

TABLE V—GERMAN DEBT BY TYPES 1939–45
(in billions of marks)

The Debt of the Reich	Mar. 1939	Mar. 1940	Mar. 1941	Mar. 1942	Mar. 1943	Mar. 1944	Mar. 1945
I. Old indebtedness before April 1, 1924	3.3	3.2	2.8	2.7	2.5	2.4	2.0
II. New indebtedness	27.4	44.7	83.1	135.0	193.0	271.0	377.3
Foreign debts	1.3	1.2	1.2	1.2	1.2	1.2	1.2
Internal debts	26.7	43.5	81.9	133.8	191.9	269.8	376.1
1. Long-term and middle-term	19.6	25.5	43.7	66.9	88.3	115.7	139.4
a. Long-term	18.7	24.1	40.5	63.9	85.4	112.8	136.6
Loans, registered claims to the government and others	7.7	13.1	20.6	30.0	39.6	51.3	63.2
Interest-bearing treasury certificates	11.0	11.0	19.9	33.9	45.9	61.5	73.4
b. Middle-term	0.9	1.4	3.2	3.0	2.9	2.8	2.8
2. Short-term	6.5	18.1	38.2	66.9	103.5	154.2	236.7
a. Number interest-bearing treasury certificates	6.1	11.3	21.3	35.1	57.5	144.5	102.7
b. Reich's treasury bills	0.4	6.5	14.9	26.0	37.3		123.8
c. Other short-term debts	0.0		2.7	5.7	8.8	9.7	10.2
Total of I and II	30.7	47.9	85.9	137.6	195.6	273.4	379.3
Loan liquidation debt lottery without drawing right, flotation purchase of savings credit certificates, etc.	0.2	4.2	3.7	4.4	2.1	1.9	1.8
Reich's credit bank			1.9	5.3	7.8	8.8	9.2
Estimated amount of credits kept secret							20.0

Source: The amounts estimated by financial experts in Berlin. Recent evidence would favor a higher figure. See page 133 for this writer's estimate based on a larger estimate for secret borrowing. The *14th Annual Report of the Bank for International Settlements,* p. 203, summarizes substantially similar Reich debt data for the years 1938–43. Also, the *15th Report,* p. 78, estimates the German debt at war's end at 400 billion marks.

The possibility of nazi secret borowing is borne out by the increase in amounts reported in the Reich budget as paid out for interest in 1944 over that of 1943. The increase in interest payments is reported to be 4.8 billion marks or an increase of 72 per cent. A 72 per cent increase in the Reich debt from 1943 to 1944 would bring the total debt at the end

of fiscal year 1944, up to 473 billion marks (189.2 billion dollars) instead of the 380 billion marks reported.[18]

It appears that the Statistisches Reichsamt data relating to Reich debt are approximately accurate up to the last year of the war, but then considerable irregular borrowing took place. By this time the nazi leaders had apparently decided that conditions were so critical that the effects of excessive borrowing would be unimportant when compared to the military holocaust into which they had already led the nation.

If the conservative figure of 473 billion marks is taken as the total German national debt, the amount would not be unbearable if Germany at the war's end were still a going economy (similar in condition to Belgium or France), but such is not the case. The German total national income, which was estimated at over 100 billion marks in 1945, will not exceed 60 billion marks during any forseeable future period. A debt which is eight times a nation's total national income is larger than can be serviced. Interest payments alone on a debt this size would amount to about 25 per cent of the German total national income.

Type of Debt. As the war progressed German government borrowing shifted in character. This was true of all the belligerents but not to the extent it was evidenced in Germany, where even secret borrowing was entered into during the last phase.

Reich long-term debt increased from 18.7 billion marks in 1939, which was 61 per cent of the total debt, to 63.9 billion marks in 1942, 46 per cent of the 1942 total, to 112.8 billion marks in 1944, which was then 41 per cent of the total debt. This trend toward the use of short-term credit was speeded up during 1944 and 1945 so that on April 30, 1945, the long-term debt was 136.6 billion marks when the total debt was not less than 400 billion marks or 34 per cent of the total debt.[19]

A very great increase was made in the use of treasury certificates and treasury bills as a method of financing the war. In 1938 treasury certificates outstanding amounted to 9 per cent of total debt, and treasury bills to 2 per cent; by the end of the war they amounted to 27 per cent and 32 per cent of total debt, respectively. In addition it is quite likely that most of the secret borrowing was achieved with this type of credit instrument.

Conclusion

The Nazis, except for one major difference, financed their war largely by the utilization of the same conventional fiscal methods as were used

[18] A larger estimate of the debt at the end of the war of from 675 to 800 billion marks is reported in the *New York Times*, January 28, 1946, p. 3. The German central government's internal debt at the end of World War I was about 146 billion marks.

[19] Table V.

by the democracies. In addition to internal sources Germany obtained extensive funds from conquered peoples. Nevertheless, it was the German population which had to bear most of their government's war costs through tax payments and purchase of government credit instruments. Up to the last two years of the war Germany's record in meeting war expenditures from taxes was comparable to that of Great Britain and the United States. As the war progressed, however, the percentage of total war costs met by taxes showed a decrease in Germany which was not evidenced in the principal Allied countries.

The Nazis did not make extensive increased use of excise taxes. This was closely related to their greater reliance upon price control and rationing and their desire to create the impression among the masses that war could be paid with the loot and collections obtained from conquered areas.

COMMUNICATIONS

Marginalism, Minimum Wages, and Labor Markets

Editor's Note—At the suggestion of the editor, Professor Lester combined a reply to the criticisms of Professor Machlup in the latter's article, "Marginal Analysis and Empirical Research" (*American Economic Review*, September, 1946) with an originally separate comment upon Professor Stigler's article, "The Economics of Minimum Wages" (*American Economic Review*, June, 1946). Rejoinders by Professor Machlup and Professor Stigler follow Professor Lester's statement.

Two recent papers[1] in the *Review* raise the question whether marginalism suffers more from its admirers or its critics. Professor Machlup's admissions and inclusions leave the doctrine weak and distended. Professor Stigler's strict application of "pecuniary" marginalism to the labor market, for which it is ill suited, exposes it to further discredit. Comment will be made first on Professor Machlup's paper, which embodies criticisms of my article in the March issue of the *Review*.[2]

I

Professor Machlup recognizes that marginal analysis of the single firm can rightly rest only on business men's "subjective estimates, guesses and hunches"[3] as to cost and revenue, emphasizes that historical antecedents are important "in the determination of product, output, employment, and prices,"[4] states that "it is not impossible that [non-pecuniary] considerations [operating independent of the principle of maximization of money profits] substantially weaken the forces believed to be at work on the basis of a strictly pecuniary marginal calculus,"[5] and admits that "we do not know" how much "possibly important qualifications" may modify the results of marginal analysis of the single firm.[6] Unfortunately such admissions and confessions of ignorance seem to be conveniently forgotten throughout most of the remainder of his paper beginning with "B. Marginal Productivity and Cost of Input," except for the following statement:

[1] Fritz Machlup, "Marginal Analysis and Empirical Research," Vol. XXXVI, No. 4, Pt. 1 (Sept., 1946), pp. 519–54 and George J. Stigler, "The Economics of Minimum Wage Legislation," Vol. XXXVI, No. 3 (June, 1946), pp. 358–65.

[2] Comment on Professor Stigler's paper was in a preliminary stage and mentioned to the editor of the *Review* prior to receipt of any word of Professor Machlup's paper.

[3] *American Economic Review*, Vol. XXXVI, No. 4, Pt. 1, p. 522.

[4] *Ibid.*, p. 521.

[5] *Ibid.*, p. 527. *Cf.* also p. 533.

[6] *Ibid.*, pp. 527–28. *Cf.* also p. 520.

"But nobody, to my knowledge, has ever undertaken to construct from actual data a marginal net revenue productivity curve for a given type of labor employed by a firm. The difficulties are too formidable and since the raw material for the calculations could not come from any records or documents but merely from respondent's guesses of a purely hypothetical nature, the results might not be much more 'authentic' than the schedules made up by textbook writers for arithmetical illustrations."[7]

Professor Machlup points out that marginalist theory "has developed gradually over a period of more than a century."[8] During much of the past half century it has flourished throughout the Western world. Yet, strangely enough, Professor Machlup points to no systematic investigation that supports the validity of marginalism in the field of modern manufacture. His paper consists merely of assumptions, presumptions, theorist's contentions, possibilities, statements of need for investigation, analogies to driving and parking automobiles, and criticisms of the empirical research carried on by others.

In criticizing the methods, interpretations, and results of others, Professor Machlup offers as "the only possibility for a fruitful empirical inquiry" use of "the more subtle technique of analyzing a series of single business decisions through close personal contact with those responsible for the decisions."[9] Seemingly the interviewer would have to be present at the very time each decision is made as Professor Machlup distrusts general replies or answers from memory.[10] In view of what he says about business men deciding by "guesses" and "hunches" and replying to question by "rationalizations,"[11] the interviewer presumably would have to be a combination Machlupian marginalist and psychoanalyst of the proper school in order to make certain that he would correctly "disentangle actual from imaginary reasons" and "separate relevant from irrelevant data."[12] The result would be unverifiable material of the most questionable character.

That my methods and data were crude and imperfect I readily admit. Indeed, I did so, stating that some of my material could be attacked on a number of the grounds that Professor Machlup details.[13] My methods, however, had the advantage of providing data directly from business executives, unscreened and unrefined by the "ingenuity" of a "subtle" analyst, and everything I did was out in the open. The executives were simply asked for factual material (*e.g.*, on unit costs, labor-to-machinery mix, etc.), or the relative importance of different factors in the firm's employment, or the adjustments the firm would make to a given change. The questions did not deal with motives; hypothetical situations were included; the experi-

[7] *Ibid.*, pp. 547–48.

[8] *Ibid.*, p. 520.

[9] *Ibid.*, p. 538, footnote 23 and text to which the footnote refers.

[10] *Ibid.*, pp. 537 and 544.

[11] *Ibid.*, p. 537.

[12] *Ibid.*, p. 538.

[13] *Cf.*, for example, p. 81, "Shortcomings of Marginal Analysis for Wage-Employment Problems, *American Economic Review*, Vol. XXXVI, No. 1 (Mar., 1946).

ment could be repeated with any desired modifications; the questionnaire contained cross-checks; and various parts of the two questionnaires afforded a broad, many-sided basis for conclusions. Substantiating data in other studies were also cited. Professor Machlup's critical comments are directed at one questionnaire, although he mistakenly thinks that he is dealing with three questionnaires, which may help to explain why so much of his criticism miscarries.[14]

Piecemeal criticism of the one questionnaire, question by question, not only misses the over-all, composite results but is unfair where one question is criticized for not providing the type of test embodied in one or more of the succeeding questions to which the same group of firms replied. For example, Professor Machlup criticizes the first question for not asking for "the effects of variations of each factor separately while the others remain unchanged."[15] That was done in one of the succeeding questions where a wage increase narrowing the firm's Southern differential for comparable jobs by 50 per cent relative to the wage rates paid by its Northern competitors was postulated. To that question Professor Machlup comments that part of the results support marginalist contentions (neglecting to mention that a significant part is contrary to such contentions) and that the answers "may not mean much."[16] Throughout most of his paper he insists that the relevant data about a firm's costs are not what objective investigation might reveal them to be but what the business executive making decisions in the firm thinks they are. When, however, such executives specifically indicated exactly how they thought their unit variable costs varied with output, Professor Machlup remarks that the results are "somewhat questionable" because they fail to conform to his presuppositions.[17] The chameleon-like character of his criticisms is perhaps understandable if one bears in mind his dogged insistence that "the only possibility for fruitful empirical inquiry" into the validity of marginalism is the method already commented upon which he himself suggested in an article published in the *Review* in 1939.

The basic issue betwen Professor Machlup and me can be simply stated. According to Professor Machlup, "the business man" in deciding "how

[14] Professor Machlup repeatedly refers to "questionnaires" when only one questionnaire is involved and uses the following headings for his discussion: "Questionnaire on Employment," "Questionnaire on Variable Costs," and "Questionnaire on Adjustments," whereas actually his comments are only on parts of one questionnaire.

It is rather disconcerting to find Professor Machlup implying that I said some things that actually I did not say. To cite only the first of numerous instances of misrepresentation, compare the text to which Machlup's footnote 6 on p. 524 refers and p. 181 of my *Economics of Labor* (1941).

[15] *American Economic Review*, Vol. XXXVI, No. 4, Pt. 1, p. 549.

[16] *Ibid.*, p. 553.

[17] *Ibid.*, p. 551. In stating that the business men's answers are "somewhat questionable," Professor Machlup implies that all of them should have answered the question on the basis of continuous utilization of equipment for 24 hours a day, which completely overlooks necessary differences in shift schedules for such reasons as the nature of the business, the location of the firm, and the attitude of employees. Comment on the matter of "plant capacity" is contained in footnote 19.

many to employ" does so according to the principle of equating "marginal net revenue productivity and marginal factor [labor] cost." The business man "would simply rely on his sense or his 'feel' of the situation"; he "would 'just know,' in a vague and rough way, whether or not it would pay him to hire more men" or to lay off some workers.[18] In his numerous statements of this "principle," which he claims is the basis of company employment policy, Professor Machlup makes no reference to his preceding admissions concerning the possible importance of historical antecedents, "non-pecuniary considerations," etc.

My position is that variations in the total volume of employment in a modern manufacturing plant already constructed are primarily the result of actual and anticipated changes in the volume of sales or orders for the products of the plant and that employers, for such reasons as those I gave, do not think or act in the labor market in terms of equating marginal net revenue productivity and marginal labor cost. As my data indicated, employers generally seem to believe that unit variable cost (and, judging from numerous interviews, particularly unit labor cost) increases significantly as the scale of operations of a plant declines from 100 per cent of plant capacity, but, I contend, the alterations in unit labor cost (and presumably marginal labor cost) that accompany decreases in the rate of plant operation do not themselves cause, or result in, any change in plant employment. And changes in the scale of plant operations can hardly be explained by marginalism where, say, product prices and demand elasticities remain unchanged with variations in actual or anticipated demand and the plant operates under declining unit variable costs up to 100 per cent capacity.

Data I presented in my paper indicated that Southern business executives in highly competitive industries believed that their unit variable costs increased considerably with a drop in the scale of operations of the plant from 100 per cent to 70 per cent of plant capacity.[19] For all 33 firms the increase averaged about 25 per cent and for a number of firms it was 35 per cent or more. If business men think that their unit variable costs (to say nothing of their overhead costs per unit) change in that fashion, I submit that it is extremely difficult to explain both the wide variations that occur in the scale of plant operations and the size of the average deviation from 100 per cent plant capacity that occurs over say a decade (especially in plants producing articles not carrying the producer's brand names) on the assumption that business men adjust their rate of operations according to the principle of maximizing money profits by equating "marginal net revenue productivity" and "marginal factor cost" over the long or short run. Such data, I contend, indicate that, on the contrary, the volume of

[18] *Ibid.*, p. 535.

[19] Plant capacity was not defined, and definition was not necessary for the purposes I had in mind. Professor Machlup apparently misses the point in complaining that I should have utilized one of the different definitions of capacity used by economic theorists. Actually most of the business men I have talked with seem to think of plant capacity as the maximum daily or weekly output that can be obtained with existing equipment and a "full crew" of workers under the regular shift schedule .Use of one of the definitions Professor Machlup suggests would only have been confusing and fruitless.

output and employment in the individual firm generally varies simply and directly with the volume of present and prospective demand for products of the plant. (Note that throughout this paper the discussion is in terms of modern manufacturing plants already equipped and not in terms of simple, handicraft operations or agriculture, which constitute the basis for so much marginalist reasoning.)

Let us take some examples based on actual experience in industry. Many firms have raised their wage rates by 10 or 15 per cent for purely local reasons—such as the location of a new high-wage plant in the same small community, the threat of union organization in the plant, negotiation of the first union contract following organization, etc.—that have no effect on all the other plants in the industry. Under the circumstances, the firm generally can be fairly certain (at least that was true up to 1946 in Southern plants in the industries to be mentioned) that such an independent wage increase would mean, usually for many years and often indefinitely, an increase of approximately that amount in its wage level relative to the scales of wages paid by practically all of its competitors. Suppose, as has frequently been the case, the company so affected is a Southern cotton mill spinning yarn for sale to weaving mills or weaving cloth for the grey goods market, or a full-fashioned hosiery mill in the South making hosiery for the grey goods market. All the products are undyed, unbleached, unbranded, standard items in a highly competitive industry characterized by large numbers of small firms.[20]

When, as has repeatedly happened, the wage rates in that one plant or firm alone rise by 10 or 15 per cent, what is the employer supposed to do according to marginal analysis? Does he ask himself what parts of his work force now cost him more than they are "worth to him"?[21] Does he, at the time the wage increase is definite or shortly thereafter, make or have a "subjective estimate" or "hunch" about the number of workers whom he will discharge because now they do not "pay for themselves?"[22] And on the basis of such a "subjective estimate" or "hunch," influenced presumably by both short-run and long-run considerations, is the employer supposed to schedule the appropriate number of discharges? Or is the employer supposed to start on a "doseing" process, reducing his work force one or two at a time until he finds the number that "in a vague rough way" again "equates marginal net revenue with marginal factor cost?" Are these the "adjust-

[20] The conditions, therefore, are that the relative change in the firm's wage scale is confined to the firm, is expected to be maintained for some time, and has no noticeable effect on product prices. Professor Machlup states (p. 548) that whether an employer has foreseen the wage change or is surprised by it and whether he reacts quickly or slowly to it may also cause the effects of the wage change to be "very different." It is, however, difficult to see why such variables should cause a significant difference for more than an extremely brief period of time in cases such as the ones under consideration. The firms could be differentiated on the basis of whether the independent wage increase was forced by local labor market conditions, by the threat of union organization, or by collective bargaining after organization, but it is doubtful whether significant differences would be revealed by such differentiation. In each case, the independent wage increase was forced on the employer.

[21] *American Economic Review*, Vol. XXXVI, No. 4, Pt. 1, p. 532.

[22] *Loc. cit.*

ments" that Professor Machlup has in mind when he says that marginal analysis explains "what kind of changes may cause the firm . . . to reduce employment?"[23]

From talking with a number of Southern manufacturers who have voluntarily granted (or been forced to grant) independent wage increases for reasons such as those mentioned above, I state that they do not adjust to the higher wage scale in any such manner. I am confident that the records for a group of Southern firms during the period of a year beginning with the month prior to the date that the independent wage increase became definite at each plant will show that, as a group, their employment did not decline relative to employment in the rest of the Southern plants in their respective industries.[24] I am also confident that most of the Southern employers who have been so situated, or who may be in the future, will state unequivocally that, around the date of such wage increases or shortly thereafter, they did not and normally would not engage in any "subjective estimates" or "hunches," based on short-run and long-run considerations, of the number of employees that they would have to discharge or the amount by which they would reduce their output or working force. And I doubt that all the "subtle" analysis and "ingenuity" of a marginalist in "close personal contact" with such business men (even if he calculates "money equivalents" for their personal satisfactions and dissatisfactions or desires and fears, and adds such "equivalents" to or subtracts them from the firm's marginal revenue and marginal cost curves as Professor Machlup mentions[25]), will make them change their answers to correspond with the contentions of marginalists.[26] They will not, I aver, claim that they rather consistently

[23] *Ibid.*, p. 521.

[24] Note is taken of Professor Machlup's contention (p. 548) that "statistical studies in the relationship between the wage rates and employment in large samples of individual firms or industries would be nearly useless because we have no way of eliminating the simultaneous effects of several other significant variables, especially those of a psychological nature." As already indicated in footnote 20, the practical effects of the psychological variables he lists would be largely eliminated by the conditions and methods described in the text. Presumably Professor Machlup would, however, continue to insist that this method is the only way to skin the cat and that "statistical investigations of the wage-employment relation of individual firms are not likely to yield useful results"—at least not useful for his purposes.

[25] *Ibid.*, p. 526. By considerable "ingenuity" Professor Machlup (p. 552) accuses me of arguing two ways. I could comment at some length on his own ambidextrousness in including all sorts of nonpecuniary considerations under marginal analysis of the business firm and in admitting lack of knowledge of "the nature, strength and effects of non-pecuniary considerations in business behavior" while insisting that "Not much depends on whether non-pecuniary considerations of the business man are translated into money terms or, instead, treated as exceptions and qualifications in the explanation of typical business conduct" (pp. 526 and 527). However, I forego such comment to employ the space for more useful purposes.

For the same reason I do not discuss his simple analogies to auto driving, purchasing spinach, etc., by which he evades the issue (*e.g.*, p. 534), conceals significant differences, and commits the fallacy of reasoning from consumer commodity purchases to purchases of labor (discussed *infra* Section III).

[26] Professor Stigler talks repeatedly of the discharge of workers as a result of higher minimum wages, stating that under "current proposals" (a minimum "of 60 to 75 cents per hour" under the Fair Labor Standards Act) "possibly several hundred thousand workers would be discharged." He states that "Employment will fall for two reasons: output falls; and with

142 THE AMERICAN ECONOMIC REVIEW [MARCH

follow a policy of varying, and especially reducing, the volume of employment in a plant in order to maintain equality between a "guess of a purely hypothetical nature" (marginal net revenue productivity) and marginal labor cost, which is especially difficult to calculate for joint, multi-processed products and which varies with a number of factors, particularly the scale of plant operations.

How about the substitution of other resources for labor with the rise in wage rates and unit labor costs? In the industries here under consideration, the Southern mills generally are the newer, more modern ones, having the more up-to-date equipment. As explained in my previous article, replies from executives of 42 out of 44 interregional concerns with some million employees stated flatly that the significantly lower wage rates for comparable jobs in the South *themselves* had not caused their firms to use production techniques or methods in their Southern plants that require more labor and less machinery than the proportion of labor to machinery used in their Northern plants.[27] Substitution of machinery and power (which generally has a higher per man-hour consumption in these industries in the South than in the North) is, of course, not the only kind of substitution of other resources for labor. However, the existence of these plant conditions considerably limits the possibilities of such substitution and, therefore, according to marginal analysis should make the labor discharges all the larger and more certain.[28]

The shortcomings of marginalist contentions are especially evident when one attempts to use that analysis to explain wage-employment relationships in one plant of a large, multi-plant concern like the Ford Motor Company or Swift and Company. It certainly is most naïve to assume that changes in employment in a branch plant of one of those companies are governed by, and in conformance with, short- and long-run changes in marginal labor cost and marginal net revenue productivity. The unreality of marginalist assumptions for such multi-plant companies is indicated by the data just mentioned, revealing no higher labor-to-machinery mix in the lower wage, Southern plants of interregional concerns. For such companies it would be difficult even to discover what official was supposed to make, for any one plant, both the required marginalist "estimates" and "guesses of a purely hypothetical nature" and also the decisions that vary (especially decrease) the volume of employment in the plant as required by the marginal calculations. It should be emphasized that the discussion and data in my March, 1946 paper and in this article have been based primarily on small, single-plant concerns, the most favorable set-up for marginalism.

Weaknesses in the "marginal principle" as an explanation of wage-employment relationships in individual firms should be evident from the

substitution of non-labor resources a given output is secured with less labor." *Cf. American Economic Review*, Vol. XXXVI, No. 3, pp. 359 and 361. His contentions are discussed further *infra*.

[27] *American Economic Review*, Vol. XXXVI, No. 1, p. 74. *Cf.* also "Effectiveness of Factory Labor: South-North Comparisons," *Jour. Pol. Econ.*, Vol. LIV (Feb., 1946), pp. 69–70.

[28] This is not to deny the importance of improvements in management about which more is said *infra*.

above discussion and data presented in my previous paper. Presumably Professor Machlup would not contend that employers establish and alter their wage scales according to the principle of each firm equating its own marginal net revenue productivity and marginal factor cost, for certainly there is plenty of evidence to the contrary.[29] Additional facts about labor markets and employer's wage and employment policies that are difficult to reconcile with pecuniary marginalism are discussed below, especially in Section III.

II

The questionable conclusions that are likely to follow from strict application of pecuniary marginalism to wage-employment problems are well illustrated by Professor Stigler's article on "The Economics of Minimum Wage Legislation." It indicates inadequate understanding of: (a) the process of wage determination in American industry, (b) actual operations in labor markets, (c) the policies and functioning of management in manufacturing concerns, and (d) the economic effects of minimum-wage fixing as observed in practice.

In considering "the effects of a legal minimum wage on the allocation of resources," Professor Stigler divides labor market situations into two types: (1) "competitive wage determination," in which employers "do not have control over the wage rates they pay for labor of given skill and application,"[30] and (2) "employer wage determination," in which "an employer has a significant degree of control over the wage rate he pays for a given quality of labor."[31] As is indicated subsequently, such a view of labor markets is unreal and misleading.

Referring to "competitive wage determination," Professor Stigler states: "Each worker receives the value of his marginal product under competition."[32] Note, *each* worker. No exceptions, no qualifications, no explanations. Professor Stigler continues: "If a minimum wage is effective it must, therefore, have one of two effects": either "workers whose services are worth less than the minimum wage are discharged" or "the productivity of low-efficiency workers is increased."[33] But in the latter case Professor Stigler con-

[29] For example, Professor W. Rupert Maclaurin found from a study of "Wages and Profits in the Paper Industry, 1929–1939" that: "The evidence seems to indicate that a great many companies gave no conscious thought to maximization of profits in the economist's sense of the term. 'Keeping in the black' was regarded as important; but within a quite broad range of action, particularly in the short run, other motives appeared to be more vital than getting the last dollar for the stockholders. . . . In many cases the maintenance of a contented working force appeared to be an objective in itself, regardless of whether it might also maximize profits." *Quart. Jour. Econ.*, Vol. LVIII (Feb., 1944), pp. 225–26.

Further support for the statement in the text is provided by the study of company wage policies and practices that I have been making during the past year and for which detailed data have been supplied by some 100 companies and over 45 interviews with company officials have been completed.

[30] *American Economic Review*, Vol. XXXVI, No. 3, p. 358.

[31] *Ibid.*, p. 360.

[32] *Ibid.*, p. 358.

[33] *Loc. cit.*

cludes that discharge of workers is also likely either because of the substitution of other resources for labor or because of the elasticity of demand for the product.[34] After some further discussion, upon which comment is made below, he concludes: "the legal minimum wage will reduce aggregate output, and it will decrease the earnings of workers who had previously been receiving materially less than the minimum."[35]

During the past 30 or 40 years there has been a wealth of experience with minimum-wage laws in the states, under the Fair Labor Standards act, and in foreign countries as well as with wage minimums under the National Industrial Recovery act and the National War Labor Board. Lack of any reference to that experience gives Professor Stigler's paper a pre-World War I flavor, as though it were contemporary with the adverse pronouncements of marginalists like J. B. Clark and F. W. Taussig on minimum-wage legislation some thirty years ago.

Much of the experience under minimum wages fails to support Professor Stigler's conclusions. He states that "the low-wage industries are competitive" in nature and offers a list including cotton textiles, men's and boys' furnishings, and miscellaneous textiles and apparel. Presumably those are industries in which, in his opinion, "each worker receives the value of his marginal product" and employers do not have "a significant degree of control" over the wage rates that they pay. Yet investigations indicate that a wide range of rates are being paid by firms in the same locality for the standard textile jobs,[36] that many Southern textile firms have not had a regular or rational pattern of occupational wage differentials,[37] that significant race differentials have prevailed for the same unskilled work at admittedly the same physical productivity,[38] and that significant differences in labor effectiveness and output per man hour have existed between textile firms paying approximately the same scale of rates and located in the same

[34] *American Economic Review*, Vol. XXXVI, No. 3, pp. 358–60 including footnote 2.

[35] *Ibid.*, p. 361. In similar vein and without any qualification, Professor John V. Van Sickle has recently written: "In and of itself, any minimum wage makes for some private unemployment." *Cf. Harvard Business Review*, Vol. XXIV (Spring, 1946), p. 282.

[36] *Cf.*, for example, the author's articles on "Wage Diversity and Its Theoretical Implications," *Rev. Econ. Stat.*, Vol. XXVIII (Aug., 1946), pp. 152–59 and "Diversity in North-South Wage Differentials and in Wage Rates within the South," *Southern Econ. Jour.*, Vol. XII (Jan., 1946), pp. 254–60.

[37] *Cf.* The articles cited in footnote 36 and the Opinion of the National War Labor Board in Southern and Northern Textile Companies case, March 9, 1945, *War Labor Reports*, Bur. of Nat. Affairs, Inc., Vol. 21, pp. 881–82.

[38] National War Labor Board cases in the South uncovered numerous instances in which a firm had race differentials from 5 to 15 cents an hour for work that was reluctantly admitted to be the same or comparable. The rate of pay for Negro sweepers, scrubbers, janitors, and yard labor in textile mills in the South has commonly been 2½ to 5 cents per hour under that for white workers on the same jobs, often in the same mill. Repeatedly the author has been told where there are dual rates for a job that the lower one is the "colored rate," yet often it was recognized that the performance of Negro workers was equal to that of whites on that job. When the Board reduced or eliminated such race differentials, Negro workers were not discharged.

labor-market areas.[39] Study of wage rates in the low-wage industries of the South clearly indicates that unorganized employers do have a fairly wide range of discretion within which to establish the level of wages they may pay.[40] Indeed, in the South the relative range of rates for the same occupations (from janitor to skilled trades) tends to be wider between the highest-paying firm and the lowest-paying firm in a labor-market area, and occupational differentials are generally less regular or rational, in low-wage "competitive" industries like cotton textiles, hosiery, furniture, and apparel than is true for the higher-wage (more monopolistic?) industries like oil, aircraft, autos, glass, and steel.

My article in the March, 1946, issue of the *Review* discussed experience under the Fair Labor Standards act directly contrary to Professor Stigler's conclusions.[41] In two industries, the firms most affected by wage minimums experienced the greatest increases in employment. With the lack of labor standards characteristic of many low-wage industries, including wide variation in wage scales between firms in the same business in a locality or "labor-market area," legally established minimum wages generally force wage increases in but a small percentage of an industry (say 10 per cent) and frequently the whole wage scale is increased in the minority of firms affected so that there is no added stimulus to substitute between labor grades or occupations. Even in the absence of unions, established manufacturing firms have not followed the practice, as stated by Professor Stigler, of discharging regular employees of the firm in order to hire new employees in their place in hopes thereby to obtain more efficient workers.

How then is a minimum wage supposed to lead to curtailed output and discharge of large numbers of workers? Through increased prices for the industry's products? Even on marginalist reasoning that seems exceedingly unlikely. Only a small percentage of the industry is affected and the affected firms are not likely to adjust by curtailing output except (in rare cases) by disposing of equipment, not replacing it as it wears out, or closing down the plant. Data previously referred to indicate that employers in the low-wage industries generally seem to believe that their variable costs per unit of output (to say nothing of fixed costs per unit) increase significantly as the scale of plant operations decreases from what they con-

[39] This statement is based on information gathered from interviews, hearings in War Labor Board cases, and replies to questionnaires. For a similar opinion of a more general nature, *cf.* Charles A. Myers and W. Rupert Maclaurin, *The Movement of Factory Workers*, 1943, p. 78 and "Wages and the Movement of Factory Labor," *Quart. Jour. Econ.*, Vol. LVII (Feb., 1943), pp. 251–53. For evidence of a lack of correspondence between labor efficiency or labor output and North-South wage differentials for interregional concerns *cf.* the author's article, "Effectiveness of Factory Labor: South-North Comparisons," *Jour. Pol. Econ.*, Vol. LIV (Feb., 1946).

[40] For some evidence from a Northern city *cf.* W. Rupert Maclaurin and Charles A. Myers "Wages and the Movement of Factor Labor," *Quart. Jour. Econ.*, Feb., 1946, pp. 251–53 and 264; and *The Movement of Factory Workers*, pp. 62–63 and 73–76.

[41] Pp. 75–76. For references to additional evidence in opposition to Professor Stigler's conclusions *cf.* my *Economics of Labor*, pp. 322–23 and 334–36.

sider to be 100 per cent plant capacity.[42] Consequently, curtailment of output in one or more plants would rarely be a rational adjustment, at least in the short run.

The possibilities of substitution of other resources for labor were discussed above. As explained, the low-wage Southern sections of many of these industries have relatively high percentages of the more modern plants and equipment, which helps to explain why the possibilities of substituting labor-saving equipment, power, or other material factors for labor in those plants are distinctly limited.

The largest remaining area of adjustment is what might be called "better management," including such matters as the selection, flow, and treatment of materials, the scheduling of production, organization of the work, better shift arrangements, regularizing sales and employment, etc. Professor Stigler doubts the validity of the contention that minimum wages may lead to the adoption of techniques previously profitable, or the discovery of new techniques, in low-wage industries subject to vigorous competition in national markets. He claims that "this 'shock' theory is at present lacking in empirical evidence."[43]

Actually there is a large volume of experience in the South and elsewhere indicating that real improvements in management, sometimes following alterations in management personnel, have occurred when one or more firms have been forced to raise wage scales because of the threat of unionism, the certification of a union as bargaining agent after an organizing campaign, or minimum wages resulting from government action. Part of the relative improvement in management in the affected firms would have been profitable before the higher wage scale took effect. Marginalists are prone to overlook the marked differences in management efficiency and the fact that management personnel, and not the work force, may be altered when the firm's operations are unprofitable. The management-stimulating effects of independent firm increases in wages and of higher minimum wages are common knowledge in business circles in the South.[44] Moreover, answers of executives of 43 Southern firms indicated that the "shock" of a relative wage increase in a low-wage section of an industry may frequently lead to increased sales efforts[45] and thus perhaps expand sales, production, and employment beyond the volume that otherwise would prevail—a result completely opposite to the expectations of the marginalists.

The "ingenious" marginalist may point out that such management improvements and increased sales efforts, though contrary to his expectations, may help to reduce unit and marginal labor cost and therefore operate

[42] *Cf.* "Shortcomings of Marginal Analysis for Wage-Employment Problems," *American Economic Review*, Vol. XXXVI, No. 1, pp. 68–71.

[43] *American Economic Review*, Vol. XXXVI, No. 3, p. 359.

[44] *Cf.*, as merely one example, the statement of an executive of a large Southern textile concern quoted "Shortcomings of Marginal Analysis for Wage-Employment Problems," *American Economic Review*, Vol. XXXVI, No. 1, p. 80.

[45] *Ibid.*, pp. 77–81.

in the direction of equating marginal net revenue productivity and marginal factor cost. Such actions can, however, hardly be described as employing workers according to the marginal principle and certainly would indicate real shortcomings for that principle as an explanation of wage-employment relationships in individual firms. Furthermore, marginal net revenue productivity and marginal labor cost may still be unequal after the management improvements or increased sales efforts. If so, what does the employer do? Curtail his output? Discharge some employees in order to reduce his working force? No, for reasons already discussed, business men do not generally think and operate that way.

At the heart of economic theory should be an adequate analysis and understanding of the psychology, policies, and practices of business management in modern industry. Contrary to the assumptions of marginalists, the quality of business management may not vary according to its compensation, nor is such management all cut to the same pattern, motivated by a single pecuniary purpose and making decisions by one method (*i.e.*, comparison of marginal magnitudes). Examination of managements in modern manufacturing corporations clearly reveals marked differences in attitudes, policies, methods, and results in firms where compensation to the management is approximately the same. Investigation of the operations of business management shows to what a large extent wage rates and employment in modern industry are influenced by factors other than pecuniary comparisons of marginal units.[46]

III

Reasoning about labor markets as though they were commodity markets seems to be an important explanation for erroneous conclusions on such matters as minimum wages. Phrases and statements like the following appear repeatedly in recent writings of economists: "the equilibrium level of wages in a purely competitive labor market"; "pure competition in the labor market under which the wage is 'given' to the firm and beyond its control"; "under a free labor market, different wage rates for the same kind of labor could not long exist"; "the wage which 'clears the market' with free entry for all qualified applicants in each classification is the economically justifiable wage"; "labor is properly priced and allocated in a competitive system if, say, all unskilled labor in a particular market sells at the same price."

[46] If business managements did all operate as the marginal theory implies, presumably they would be intensely interested in arranging their cost systems so that marginal estimates and comparisons might be made. Actually a study by the Office of Price Administration in 1946 revealed that, of 187,370 companies investigated, about 85 percent did not allocate cost on a product basis. (See *A Report on Cost Accounting in Industry*, Accounting Department, Office of Price Administration, June 30, 1946, pp. iii and iv.) That means that more than five out of every six firms do not have total cost figures separated by product and could not, therefore, even calculate average unit costs, to say nothing of marginal unit costs or "marginal net revenue product."

Such data help to explain why, from the 430 Southern manufacturers to whom I sent questionnaires, only 56 replies were received that contained estimates regarding changes in their unit variable costs with changes in scale of output or regarding their adjustments to relative changes in wage scales.

Contrasts between labor and commodity markets are striking. The labor market itself is even difficult to define; the initial sale takes place at each employer's employment office or on the job and thereafter presumably occurs at each work bench in continuous fashion so long as hourly workers remain at work.

A job is a complex of factors, most of which have no counterparts in commodity markets. Such factors include physical conditions in the plant, workloads, speed of operations, danger of the work, length of the workday and workweek, vacations and holidays, benefit and recreational programs, plant rules, seniority provisions or practices, steadiness of employment on the job, advancement possibilities, prospects for relative wage increases or decreases on that job in that firm, existence or non-existence of a union and a labor agreement, the kind of union, etc.

In addition, there are a number of psychological and social factors that recent investigations indicate are important in explaining differences in job satisfaction and effectiveness of labor, such as the human quality of supervision and top management, friendship and personal loyalties, congeniality of fellow workers, social life in the shop, social status of the work, and notions of fair and equitable treatment.

Company wage and employment policies, even in the absence of unions, generally differ markedly from their policies with respect to the purchase of commodities. In considerable measure, their labor-market policies do not strictly follow demand, supply, or mere price considerations. Usually employers make wage increases or decreases across-the-board for the various occupations and not in terms of local demand and supply for each occupation. Normally companies of any size will not dismiss established employees in order to hire other labor offering to work at wage rates below the company's current rates. The labor-market policies of many companies are governed to a considerable degree by a desire to preserve their reputation in that market and to develop and maintain employee "loyalty" to the company.

Unlike a reduction in commodity purchases, reduction in an employer's work force generally involves significant costs to the employer. It is costly, for example, because of the adverse effects upon the morale of the remaining workers, the tendency for workers to restrict output in the face of reductions in the work force, the need to shift workers to different jobs with changes in the scale of plant operations, and possible increases in the employer's tax rate under experience rating in unemployment compensation (not to mention plans for dismissal compensation, guaranteed employment, or guaranteed wage income). The added costs of work-force reduction may be especially high under a union agreement. Such factors, though troublesome to a marginalist, must be taken into account in discussing employment adjustments to wage changes.

A firm may increase its wage scales for a variety of non-market reasons[47]

[47] In 1937, Professor John W. Riegel reported that "Executives of 60 important firms stated at a recent conference that some of the differences in wage rates between firms could be explained 'only on grounds of one employer's ability and willingness to pay more than other employers for apparently comparable services'." *Wage Determination*, p. 8.

such as notions of "fairness" and "rightness," increases in the cost of living, custom and tradition, maintenance of historic relationships, desire for the security from criticism provided by conformance to an industry pattern, public sentiment, etc. Wage changes often spread from company to company by emulation rather than because of present or prospective demand and supply in the labor market. The extent to which companies follow a leader, the industry, or a job evaluation system, and disregard narrow market considerations in making wage changes is brought out by a study of company wage policies on which the author is engaged.

Many company policies in the labor market simply do not conform to the precepts of pecuniary marginalism so that "each worker receives the value of his marginal product under competition." Consequently, a wide diversity of wage rates may exist and persist in the same locality for workers of equal skill, ability, and effectiveness.

Such matters are elementary and commonplace to a student of labor but they seem to be largely overlooked by theorists of the marginalist faith. It will not do to dismiss them with such a remark as: "Not much depends on whether non-pecuniary considerations of the business man are translated into money terms or, instead, treated as exceptions and qualifications in the explanation of typical business conduct."[48] Even on the "pecuniary" side, marginalism has become suspect for some of the reasons indicated above and in my previous paper. The existing and expected volume of product sales appears to be a factor in firm employment that operates independent of the principle of equating its marginal net revenue productivity and marginal labor cost. Wage-employment relationships for individual firms cannot be adequately explained if we confine our thinking within the mental ruts of the marginalists.

RICHARD A. LESTER[*]

[48] Machlup, *American Economic Review*, Vol. XXXVI, No. 4, Pt. 1, p. 526.

[*] The author is associate professor of economics in the department of economics and social institutions at Princeton University.

Rejoinder to an Antimarginalist

In his note[1] Professor Lester replies to certain critical comments which I made in a recent article[2] on antimarginalist prejudices and misunderstandings of the type exhibited by him.[3] I avail myself of the traditional right of rejoinder.

I begin with a concession. I readily concede to Professor Lester that I did not know whether he had asked his questions of Southern industrialists on one sheet of paper or on separate sheets; at one time or at different times. Thus I spoke of each of three sets of questions as a "questionnaire." Now I learn that they were "parts of one questionnaire" (although there had been

[1] "Marginalism, Minimum Wages, and Labor Markets," pp. 135–48 above. Cited hereafter as "Marginalism."

[2] "Marginal Analysis and Empirical Research," *Amer. Econ. Rev.*, Vol. XXXVI (Sept., 1946), pp. 519–554.

[3] "Shortcomings of Marginal Analysis for Wage-Employment Problems," *Amer. Econ. Rev.* Vol. XXXVI (Mar., 1946), pp. 63–82. Cited hereafter as "Shortcomings."

"two questionnaires").[4] I wonder what difference that makes. The inconsistencies between the answers to Professor Lester's questions on employment and adjustments are neither eliminated nor explained but rather emphasized by the fact that they were given in response to "one" questionnaire.[5]

I am sorry that with all the expository efforts invested in my article I did not succeed in making clear to Professor Lester what marginal analysis means and what it does not mean. Had I succeeded, he could not have reiterated several statements of his earlier article.

It would be wasteful of time and space if I countered reiteration with reiteration. It may be desirable, however, to restate the issues concisely in the order of the "tentative conclusions' 'which Professor Lester enumerated at the end of his earlier article.

1. "*Market demand is far more important than wage rates in determining a firm's volume of employment.*"[6] If "important" means that market demand is a more *variable* variable than wage rates in the determination of employment, Professor Lester is absolutely right and I know of no one who has ever said anything to the contrary.[7] Economists cannot but be aware of the fact that market demand (orders, sales, sales expectations) is subject to seasonal and cyclical variations while wage rates are usually settled by contract for specific periods such as a year; and that market demand may be halved or doubled in these fluctuations while wage rate variations of as much as 20 per cent in one year are an extraordinary occurrence (except in countries with heavy inflation). Hence, there is absolutely no argument about the fact that "variations in the total volume of employment in a modern manufacturing plant already constructed are primarily the result of actual and anticipated changes in the volume of sales or orders for the products of the plant."[8] Professor Lester makes it appear as if this were *his* "position" and as if it were inconsistent with marginal productivity theory. In fact, sales expectations are an integral part of marginal productivity, as I explained patiently in my article.

2. "*Most manufacturing concerns apparently are considered by their executives to be operating at decreasing unit variable costs all along the scale between 70 and 100 per cent of plant capacity. Consequently, it is seldom practical for a firm to curtail output (and, therefore, employment) simply in response to an increase in wage rates.*"[9] Decreasing unit variable costs have always been

[4] "Marginalism," p. 137.

[5] "Marginalism," p. 137. On the basis of one set of questions Professor Lester had concluded that substitution between labor and machinery is rare; on the other set of questions he had reported that in firms with high labor costs the introduction of labor-saving machinery was the most important form of adjustment to increased wage rates. Instead of explaining the contradiction, Professor Lester now declares that my mistake of thinking of separate questionnaires instead of only one "may help to explain why so much of [my] criticism miscarries."

[6] "Shortcomings," p. 81.

[7] If "important" should mean that demand is in some sense a more fundamental variable, the statement would be meaningless. The significance of the concept of demand for the product of a single firm lies in the juxtaposition to costs.

[8] "Marginalism," p. 138.

[9] "Shortcomings," p. 81.

included among the possible assumptions for marginal analysis; their effects neither contradict nor qualify any of the general propositions of marginal productivity theory. That certain manufacturing industries operate under decreasing unit variable costs has been assumed in conventional theory. Professor Lester states that "consequently" output reductions in response to wage rate increases are "seldom practical." This is a *non-sequitur*, and no amount of reiteration can make it a correct inference. To be sure, manufacturing firms may not "curtail output" in *direct* response to wage increases; they are more likely to raise selling prices, which in a given market situation will reduce sales—so that it would be the sales volume rather than the wage level that appears as the "direct" cause of any output reductions. (In this case the reduced sales volume is, of course, not a reduced demand in the sense of conventional terminology.)

3. "*In modern manufacturing, a firm's level of costs per unit of product is influenced considerably by its scale of output; the reverse, as assumed by conventional marginalism, is not generally true.*"[10] "Costs" may mean either a series of points on a curve or the level of the whole curve. It is not clear which "cost" Professor Lester has in mind when he says that the "reverse" —that is, output influenced by cost—is not generally true. His statement may mean at least three things. If it is to mean that the volume of output produced by the firm is usually not influenced by the shape of the cost curve, it is clearly incorrect, or producers would in good times produce far above "capacity" and might in slack times curtail output even more than they do. If it is to mean that there are situations in which a change in the level of the cost curve need not result in a change in output, it is a correct statement; indeed such situations, far from being inconsistent with marginal analysis, can be most conveniently described by it. If, finally, it is to mean that changes in the cost level will *usually* be without influence upon output, then the statement is not supported by any evidence and should be considered as false until such evidence is furnished.

4. "*For many manufacturing concerns it is not feasible, or would prove too costly, to shift the proportion of productive factors in response to current changes in wages, in the manner suggested by marginal analysis.*"[11] If "current" is to suggest "immediacy," there is nothing wrong with this statement, except the last clause. Marginal analysis of the general equilibrium has often assumed absence of substitutability between factors in a given plant. This assumption of fixed coefficients of production was made for the sake of simplicity. In reality the elasticity of technical substitution is probably much greater than most "marginalists" have assumed. To be sure, a continuous, gradually sloping, short-run marginal productivity curve for a productive factor employed in a single firm implies a considerable elasticity of substitution between factors, but not a greater one than that which Professor Lester confirms as existing when he permits variations in the utilization of plant capacity between 70 and 100 per cent. Substitution between

[10] *Loc. cit.*
[11] "Shortcomings," p. 82.

capital and labor does not have to take the form of changes in the machinery of the plant; marginal productivity curves may be relatively elastic over certain ranges without any such variability of equipment. It goes without saying that there is much more substitution in the long run than in the short run.

5. "*The practical problems involved in applying marginal analysis to the multi-process operations of a modern plant seem insuperable, and business executives rightly consider marginalism impractical as an operating principle in such manufacturing establishments.*"[12] This is a misunderstanding of the meaning of marginalism. Professor Lester relied on the ability of his industrialists to know their "unit variable cost" at various scales of output. Yet, calculations of unit costs, in a single-process plant as well as in a multi-process plant, are much more complicated than estimates of marginal cost. Incremental costs and revenues can be known without any knowledge of average costs and revenues; the reverse is not true. (For example, one may know the *additional* expenses caused by increases in output without bothering to allocate and calculate the *total* expenses before or after the increase. Those totals are needed for a calculation of averages; of course, whenever the totals are known the differences between the totals are given implicitly. In cases of joint products—multi-product plants—incremental (marginal) cost is the only cost that is separable and determinate.)

6. "*Of the three adjustments stressed by business executives to meet a rise in wages relative to those paid by competitors, two—better management practices and increased sales efforts—are neglected by conventional marginalism; whereas the adjustment stressed by marginalism—curtailment of output—is considered so unimportant and exceptional as to be mentioned in only one out of every 11 replies.*"[13] Professor Lester refers here to an item in his questionnaire in which the respondent business man should state that he would "reduce production by deliberately curtailing output." Such wicked conduct Professor Lester represents as the one "adjustment stressed by marginalism." As if marginalist theorists had never said anything about adjustments through higher selling price, greater selling efforts, changes in quality and type of product, different production methods, substitution between factors, etc. Professor Lester, however, adds this to his last conclusion: "*Indeed, experience seems to indicate that, on an individual-firm basis, the adjustments considered important by the business executives may, at times, even result in larger firm employment at a higher wage level.*"[14] No marginalist theorist will deny that this ("at times") is a *possibility*. But in order to justify putting it as the final proposition in a set of conclusions supposedly "drawn from the data contained" in his study, Professor Lester should have offered some support for the *probability* of the occurrence. Yet, he has furnished not even the thinnest scrap of evidence, not the vaguest suggestion of plausible reasons in support of the proposition.

[12] *Loc. cit.*

[13] *Loc. cit.*

[14] *Loc. cit.*

I have the impression that Professor Lester is fighting against marginal productivity theory chiefly because it appears to establish a presumption that changes of wage rates result in inverse changes of employment in the single firm. I must say that there is nowhere an explicit statement to that effect, neither in his earlier article nor in his present communication, and I must beg his pardon if my impression is incorrect. But Professor Lester repeatedly refers to "cases" in which increased wage rates need not result in reduced employment and may result or did result in increased employment. (Unfortunately, he does not bother to say whether the demand for the product was unchanged in these cases. But he does not hesitate to refer to experiences between 1939 and 1941—defense boom!—to support his argument.) If my impression about the chief aim of the attack is correct, Professor Lester could have served his purpose by showing under what conditions the presumption would not hold and by proving that such conditions actually prevail in a number of industries. Instead, he set out to fight against "marginal analysis" in general and to prove *its* "shortcomings." Yet, of his six "tentative conclusions" the first four are perfectly consistent with marginal analysis, and the sixth—at least in the cautious way in which it is formulated—is not inconsistent with it. Only the fifth proposition—that marginalism is "impractical"—would, if true, contradict marginalist theory of business conduct (or at least one of its interpretations).

What is Professor Lester's alternative theory of business conduct and employment? I take it that Professor Lester does not accept the anti-marginalist "full-cost" theory of pricing which was advanced by Hall and Hitch.[15] This theory would suit the purpose of proving insensitiveness of the firm's output to wage increases much worse than marginal analysis; it holds that wage increases as a rule are shifted forward in full to the consumer—which would reduce output by more than the marginal principle usually calls for.

According to marginal productivity theory employment depends on several variables: anticipated selling prices and sales quantities with their potential variations; technological possibilities; conditions of supply of complementary and substitutable factors; and conditions of supply of the factor in question. Is it perhaps Professor Lester's theory of employment in the individual firm that of the several variables considered by marginal productivity theory only one counts, namely, the demand for the product? This interpretation is suggested by the fact that his proposition on the importance of market demand is reiterated several times in his foregoing note. He varies the formulation of the proposition by the use of the modifiers "primarily," "generally," "simply," "independently." Thus, after having emphasized the primacy of selling possibilities in the determination of employment—see the sentence quoted above with Professor Lester's first conclusion—and after minimizing the importance of the principle of maximizing business profits, he says that "*on the contrary*, the volume of output and employment in the individual firm *generally* varies *simply* and directly with

[15] R. L. Hall and C. J. Hitch, "Price Theory and Business Behavior," *Oxford Econ. Papers*, Vol. 2 (1939).

the volume of present and prospective demand for products of the plant."[16] And again: "The existing and expected volume of product sales appears to be a factor in firm employment that operates *independent* of the principle of equating its marginal net revenue productivity and marginal labor cost."[17] If this were all, the difference between Professor Lester and the marginal productivity theorists would boil down to the question whether or not it is true that employers take account of anything besides the selling possibilities for their wares. Professor Lester, guarded by a few adverbs, denies it. Marginal productivity theorists believe that other variables count too, although in certain well-defined situations one or another variable may be neutralized.

Professor Lester tries to show why these other variables are of no importance. His favorite point, that conditions of "declining unit variable costs up to 100 per cent capacity"[18] somehow interfere with the operation of the marginal principle, is untenable. Another of his points concerns cases where "product prices and demand elasticities remain unchanged with variations in actual or anticipated demand."[19] We know several cases in the theory of imperfect competition in which selling prices remain unchanged in spite of changes in demand. Perhaps Professor Lester thinks of the case of tacitly fixed prices under oligopoly in which the sales curve breaks off at the volume of sales expected at the given price. (Since under the oligopolistic conditions price reductions are regarded as impractical, there is no practical possibility of expanding sales.) We all have learned that in such a case the marginal revenue curve exhibits a vertical drop. If there should also be no possibility of technical substitution for labor, the marginal productivity curve will, of course, reflect that condition and have the vertical range over which changes in wage rates (or marginal labor cost) are without any effect upon employment in the firm. This is nothing new to the marginalist. Does Professor Lester wish to regard it as the "general theory" of employment in the firm? To me it is a special case.[20]

Other points brought up by Professor Lester refer to the cost of changing the size of the work force. To reduce employment may be costly for several reasons: deteriorated "morale of the remaining workers"; possible slowdowns; increased "employer's tax rate under experience rating in unem-

[16] "Marginalism," p. 138. Emphasis supplied.

[17] "Marginalism," p. 148. Emphasis supplied.

[18] "Marginalism," p. 138.

[19] *Loc. cit.*

[20] The vertical range in the marginal productivity curve of labor employed in the firm will make the firm insensitive to changes in the wage rate *only if these changes are confined to that firm.* If the competitors of the firm must pay the same or similar wage increases, the situation is altogether different: the oligopolistic sales curves will shift because each producer is apt to expect his competitors to follow suit when he raises his selling price in line with the increased production cost; hence, the "break" of the "imagined demand curve" will occur at a higher price; but at this increased price the physical sales volume will be smaller, and employment will have to be reduced. Propositions about oligopoly situations making selling prices inflexible and employment in the firm insensitive to increased cost must not be generalized: they are not likely to hold when the costs of competing producers are also increased.

1947] COMMUNICATIONS 155

ployment compensation," etc. Every "marginalist" will agree with Professor Lester that "such factors . . . must be taken into account in discussing employment adjustments to wage changes."[21] (Are there, after all, "employment adjustments to wage changes"? Does then employment vary also on account of other things than demand? If Professor Lester grants all this, what is left of his case against marginal productivity theory?) Professor Lester is mistaken in thinking that to take account of such matters is "troublesome to a marginalist." No trouble at all. The cost of changing the work force is one of the causes—besides the smaller elasticity of the short-run sales curve and the difficulties of certain types of technical substitution—why marginal productivity curves are less elastic in the short run than in the long run. (Or, if one prefers to look at change-over costs of this sort as part of the conditions of labor supply, they will make the marginal factor cost curve less elastic in the short run than in the long run.) The "mental ruts of the marginalists"[22] are equipped to take care of all the economic considerations which Professor Lester has mentioned as factors in business decisions. This makes marginal analysis less simple but more revealing than a theory which tries to explain the volume of employment in the firm solely with reference to its sales possibilities.

FRITZ MACHLUP*

[21] "Marginalism," p. 147.

[22] "Marginalism," p. 148.

* The author is professor of economics at the University of Buffalo.

Professor Lester and the Marginalists

Professor Lester continues his attack on economic theory with a rejection of my analysis of the effects of minimum wage legislation.[1] The grounds for the rejection arise only in small part from peculiarities in my presentation—which is termed a "strict application of 'pecuniary' marginalism"; much more they arise from alleged defects inherent in "marginal analysis." Thus his criticisms also refute, or fail to refute, modern price theory. It therefore seems more appropriate to explain briefly why economic theorists find Lester's general position unconvincing rather than to argue particular points on minimum wages.

1. Economic theory may refer to the logical relationships between economic magnitudes, or to both the logical relationships and their empirical content. It is a formal property of a maximum profit position that the marginal cost of a productive service equal its marginal value product, and it is an empirical property that the marginal physical product curve have a negative slope. There is some ambiguity concerning the object of Lester's attack, but it seems a fair inference that to him the empirical content of price theory is seriously deficient, while the logical structure is usually, but by no means always, valid. This interpretation seems reasonable even though he persists in denouncing "marginal analysis," a phrase that con-

[1] "Marginalism, Minimum Wages, and Labor Markets," pp. 135–48, above.

notes the formal side of theory—and in any event a meaningless phrase unless some contrast to "marginal" (or is it "analysis"?) is explained.

2. In the less frequent case, then, Lester finds the logical structure of price theory defective. Every theorist would welcome demonstrations of specific errors found in the works of leading modern economists. But, instead, Lester has a penchant for attributing to anonymous "marginalists" theories that I have never before encountered in economic literature. I may quote an example from his *Economics of Labor* since this passage is still recommended in his recent writing. One of the nine assumptions underlying the marginal productivity theory, we are told, is

> (6) That the employer in an imperfect market will always reduce his price to increase his sales, whenever such action may add to his short-run profits. Employers following a price policy based on long-run considerations may not wish to sacrifice future profits in order to maximize present profits, especially when price reductions might antagonize customers or lead to a price war. It is not clear from the theory what production and employment policies an employer is assumed to pursue when there is a difference between the policy that would maximize profits in the short run and one that would maximize profits in the long run.[2]

Will Lester please give us the specific reference to just one leading economist who has made this stupid assumption?

3. More often Lester finds fault with the theorists' empirical assumptions. Everyone will agree with him that economists have more often made errors —of omission as well as commission—in observation than in logical analysis, and that incalculable amounts of good empirical work are still needed. But our empirical errors have not been so crude as those with which we are charged.

We may turn again to the *Economics of Labor* for examples of fictitious—and anonymous—empirical errors. Here are three more of Lester's nine assumptions of the marginal productivity theory:

> (7) That the market for labor is a perfect market, so that the employer will not affect the wage rate no matter how much labor he himself hires.
>
> (8) That no element of monopoly has entered into the determination of the prices for the other factors of production.
>
> (9) That the employers' demand curves for labor correspond to the marginal-productivity curves of their workers and that the total demand curve for all labor is the sum of all employers' individual marginal-productivity curves.[3]

A theory that assumes 7 or 8 is of restricted applicability. The ninth assumption is probably meaningless—what can the demand curve for physicists + charwomen be?—and if meaningful, then internally inconsistent because the firms' demand curves are not independent. Fortunately, these assumptions are also strangers to the marginal productivity theory.

Or consider a more recent example: "Those who argue for wage reduc-

[2] R. A. Lester, *Economics of Labor* (1941), p. 181.

[3] *Ibid.*, pp. 181–82.

tions on the grounds that a certain relationship exists between wage rates and employment tend to overlook the fact that a shift to less capitalistic or more labor-consuming method may be impractical not only for reasons given above but also because the skilled workers necessary to operate the antiquated equipment are no longer available."[4] I shall mention only three of the possible meanings of this statement. (1) The "marginalists" contend that substitution of labor for capital often requires a reversion to "antiquated" techniques operated by laborers with obsolete skills. References? (2) The "marginalists" usually overlook or deny that a fall in the wage of one type of labor may lead to an increase in the demand for other kinds of labor whose wage rates have not fallen. References? (3) A fall in the wage rate of a given type of labor does not lead to additional employment of this type of labor. Evidence?

4. Even if large logical or empirical errors had been committed by leading modern economists, Lester could not refute price theory merely by demonstrating these errors. A theory can be refuted only in its strongest version, and it would be a necessary part of Lester's task to show that correction of these blunders would lead to logical inconsistency or empirical contradiction or deprive the theory of its ability to forecast economic events. But first the blunders in the existing theory should be demonstrated: Lester's reformulations have not been so happy as to make this first step redundant.

5. Lester apparently believes that the findings of his empirical studies must be accepted quickly and completely, presumably because they are "facts." Unfortunately, the details of his studies are not reported in sufficient detail to assess their validity or, indeed, even to understand their meaning. Consider an example.

As a rule, average variable cost falls when output rises, until capacity is reached. How were the entrepreneurs who filled in the questionnaire instructed to segregate variable costs? How was capacity defined? How were the diverse products of a firm to be added to secure an index of output? What were the characteristics of the firms that responded (in comparison with the industries at large): was their scale of operations growing; were they equally subject to competitive pressures; etc.?

6. Some of the findings in Lester's studies are impossible, and some are wholly in keeping with the "marginal" theory; yet both types are held up as refutations of the theory. An example of the impossible is the finding that when 6 metal-working firms increased output from 70 to 80 per cent of capacity—a 14.3 per cent increase of output—the average decline of average variable costs was 15.9 per cent. Hence on average the total cost fell by 4.9 per cent when output rose 14.3 per cent. We shall not accept this result even if Lester obtains it from 6,000 metal-working firms. An example of the expected is that a rise in wages may lead to increased selling efforts. It is said that "such actions can, however, hardly be described as employing workers according to the marginal principle,"[5] and yet it is surely part and

[4] "Shortcomings of Marginal Analysis for Wage-Employment Problems," *Am. Econ. Rev.*, Vol. XXXVI, No. 1 (Mar., 1946), p. 73.

[5] "Marginalism, Minimum Wages, and Labor Markets," pp. 135–48, above.

parcel of the marginal productivity theory that if the price of one productive service is increased, other productive services will be substituted for it.

7. Lester's use of others' empirical studies is equally disquieting. For example, he cites two industries in which employment rose more rapidly (between 1937 or 1939 and 1941) in the section of the industry most affected by minimum wage actions.[6] That the studies pertained to identical firms at both dates did not interest him; although by parallel logic it can be shown by a current inquiry of health of veterans in 1940 and 1946 that no soldier was fatally wounded.[7] "For the purposes of this paper there is no need to analyze individual cases where the results are so opposite to the expectations of marginal analysis and to assess the responsibility of each factor for those results."[8] This is regrettably true: for Lester's purposes it is unnecessary to analyze contradictions of the marginal productivity theory, for the chief of these purposes is to indict the theory. But if his purposes were to understand economic phenomena and to improve our theory of their behavior, these contradictions would be of crucial importance and they would receive exhaustive analysis. The economist is not a prosecutor, he is a judge.

GEORGE J. STIGLER*

[6] *American Economic Review*, Vol. XXXVI, No. 1, pp. 75–76.

[7] The analogy is reasonably complete; of one of his industries it is reported: "Of 128 plants from which information was sought, 16 were found to be out of business. . . . Fourteen of the sixteen plants paid lower average wages than the average for their division of the industry in 1937 and only two paid higher wages." "Hourly Earnings in the Furniture Industry," *Mo. Lab. Rev.*, Sept., 1941, p. 744 n.

[8] *American Economic Review*, Vol. XXXVI, No. 1, p. 76.

* The author is professor of economics at Brown University.

Effects of Redistribution of Income on Consumers' Expenditures[1]

Introduction and Summary

It is a commonly held view among economists that underemployment is the result of the excess of intended saving over investment. There are two ways of reducing this excess, either by increasing investment or by increasing current expenditures so that current savings are reduced. This paper is an attempt to make use of available data in order to examine one of the means often suggested for increasing consumers' expenditures—the redistribution of current income.

Since the resulting estimates of the increase in consumer expenditures resulting from income redistribution are small, the conclusion is drawn that if the present data are correct, too much emphasis should not be placed on income redistribution for the solution of the savings-investment problem.

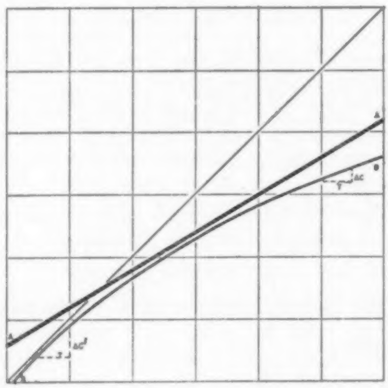
[1] This study was begun under the direction of Everett E. Hagen and completed under that of Richard A. Musgrave at the Board of Governors of the Federal Reserve System, Washington, D. C. The writer wishes to acknowledge his indebtedness to Mr. Hagen and Mr. Musgrave, and to other members of the research staff of the Board of Governors, who made valuable suggestions. He also wishes to express his appreciation to the Bureau of Labor Statistics and the Bureau of Old Age and Survivors Insurance, both of whom made available unpublished data.

However, the data are inadequate to arrive at a definite conclusion. A method is suggested for testing the data by linking survey estimates of income with social security data on incomes. Such linking has been done in the case of one small sample. The results suggest that reporting errors in available data may tend to cause understatement of the effects of redistribution. It is recommended that a similar test of survey data be made on a national scale. Whether redistribution of income will materially increase consumption is such an important socio-economic question that every effort should be made to improve our knowledge concerning it.

I. *Reducing Savings by Income Redistribution*

Past income studies have shown that people in the upper income brackets save a larger fraction of their income than do people in lower income brackets. The substantial difference between the fractions of total income

CHART I



saved in different income brackets has led many to believe that transferring income from upper bracket consumers to lower bracket consumers would greatly increase aggregate consumer expenditures out of a given total income, and correspondingly reduce savings.

However, considering only the differences between fractions of total income spent for consumption by various brackets overestimates the results. Actually, the effect of redistribution depends on the marginal rather than the average propensity to consume at various levels of income. This principle, by now fairly familiar to econometricians, is illustrated by Chart I, which presents two hypothetical sets of average expenditures by levels of income. Line AA, with constant slope, shows a situation where the marginal propensity to consume is the same at any level of income, even though the fraction of total income spent for consumption declines steadily as income increases. In such a case, redistribution of income from higher to lower in-

come brackets will make for no change whatever in aggregate expenditures.[2] Each dollar of income transferred will reduce expenditures in the upper brackets by exactly the same amount by which it increases expenditures in the lower brackets. Line *BB*, convex from above, shows a situation where the marginal propensity to consume is greater in the low than in the high brackets. In such a case, redistribution will increase aggregate expenditures, since each increment of income transferred (ΔY) will increase expenditures in the low brackets ($\Delta C'$) by a greater amount than it will reduce expenditures in the high brackets (ΔC). Clearly, the greater the difference between the marginal propensities to consume at high and low income levels, the greater will be the change in expenditures brought about by income redistribution.

Many economists and political leaders who believe that income redistribution will increase consumer expenditures apparently base their belief upon the common observation that low-income families spend a greater share of their incomes than high-income families. Chart I demonstrates that this conclusion is a ***non sequitur***. If the income-expenditure behavior of United States consumers resembles that portrayed by the curve *AA*, rather than the curve *BB*, a basic tenet of the current political philosophy of many liberals must be modified. Hence the available data merit careful analysis.

Expenditure Lags

In any actual situation, redistribution of income may well be accompanied by a lag in adjusting expenditures and savings. This possibility is here ignored. It is assumed that there is no lag. That is, we assume that a man whose income rises from say \$500 to \$1,000 will immediately spend out out of his new income the same amount as a man who had an income of \$1,000 to begin with. Likewise, a man whose income falls from \$4,000 to \$3,000 will spend the same amount as a man whose income was \$3,000 to begin with. Moreover, this analysis is limited to short-run aspects of redistribution. It measures changes in the percentage of income saved due to redistribution of a ***given*** income total, but does not attempt to analyze subsequent changes in total income which may result, or their later effects upon income distribution and savings. Further, no allowance is made for the fact that, with redistribution of income, saving habits might be materially altered. It is believed that these restrictions of the analysis do not destroy the validity of the conclusions drawn.

The study likewise ignores the effects upon total expenditures of any change in investment resulting directly or indirectly from income redistribu-

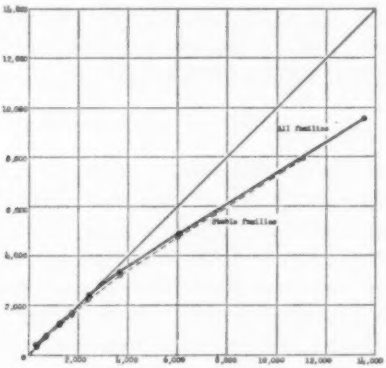
[2] For the lowest part of the income range, the curve shows dissavings, that is, expenditures in excess of income. There is no difference in principle between transfer to saving or dissaving groups. The result in each case will depend upon the amount of additional expenditures out of the increase in income, whether accompanied by increased saving or by reduced dissaving. An increase in income for dissaving groups will, in the case illustrated by the line *AA*, tend to be accompanied by a reduction in dissaving. Expenditures by consumers who dissave will, therefore, tend to increase by only a fraction of the additional income.

tion. Such effects must be allowed for in estimating the total effect of redistribution.

Basic Data

Two large-scale sample studies of spending and saving habits have been made in recent years. The first of these was the consumer expenditures study of 1935–36 by the National Resources Committee.[3] The second survey was the consumer spending and saving study of 1941 by the Bureau of Labor Statistics of the United States Department of Labor,[4] and the Bureau of Home Economics of the United States Department of Agriculture. One of the improvements of the 1941 survey over the 1935–36 study is in the 1941 personal tax data which are sufficiently inclusive to use with confidence to obtain "disposable income" or income after taxes.

CHART II
AVERAGE EXPENDITURES BY LEVEL OF DISPOSABLE INCOME
(all families and families with stable income)



The 1941 consumers' spending and saving study was a sample survey designed to reveal the national distribution of income and the patterns of expenditure and income of the country. The survey covered single individuals and families of two or more in urban, rural non-farm, and farm areas. For theoretical as well as practical reasons, it seemed advisable for our purposes to leave out all single individuals and all farm families and to include only urban and rural non-farm families of two or more.[5] In estimating a combined distribution, the sample data for urban and rural non-farm

[3] U. S. National Resources Committee, *Consumer Expenditures in the United States: Estimates for 1935–36* (Washington, *1939*).

[4] U. S. Bureau of Labor Statistics Bull. No. 723, *Spending and Saving of the Nation's Families in Wartime* (Washington, *1942*).

Another study, *Survey of Prices Paid by Consumers in 1944*, was made in 1944 by the Bureau of Labor Statistics. It is not included here for the following reasons: (1) its covers only urban communities; (2) saving-spending habits were distorted by rationing and the non-availability of consumers' goods.

[5] See Appendix A.

groups were given weights based in part upon unpublished Office of Price Administration data.[6] This distribution is shown in Table I which gives average income, expenditures after tax, and savings for each income bracket. Chart II illustrates these data by showing average expenditures by level of income. The shape of the income-expenditures curve indicates that income redistribution will cause some increase in expenditures.

TABLE I.—AVERAGE INCOME AFTER DIRECT TAXES, AVERAGE EXPENDITURES AND AVERAGE SAVINGS BY INCOME BRACKET: ALL NON-FARM FAMILIES, 1941

(All data in dollars)

Income Bracket	Average Income	Average Expenditures	Average Savings
0– 500	321.1	408.5	−87.4
500– 1,000	740.6	797.1	−56.5
1,000– 1,500	1,252.0	1,286.0	−34.0
1,500– 2,000	1,751.2	1,697.5	53.7
2,000– 3,000	2,458.7	2,400.9	57.8
3,000– 5,000	3,693.5	3,370.1	323.4
5,000–10,000	6,101.7	4,925.8	1,175.9
10,000–over	13,561.1	9,580.0	3,981.1

Statistical Techniques of Redistribution

Our technique for redistributing income is to adjust the average income for each bracket by moving it closer to some intermediate income figure—for example, the mean of the entire distribution. Each bracket average is raised or lowered by a given percentage of the difference between it and the mean. Redistribution by this method leaves aggregate income unchanged.

In order to cover a wide range of possibilities, three percentage adjustments are used, a 10 per cent movement toward the mean, as a moderate redistribution, 50 per cent as a severe redistribution, and 100 per cent, which makes all incomes equal, as the maximum redistribution. For example, the average income of the $0–500 bracket in Table I is $321 and the average for the entire distribution is $2,163. The difference between the two figures is thus $1,842, and the 50 per cent redistribution raises the average of the $0–500 bracket by $921, so that the new average income for that bracket becomes $1,242. For the $5,000–10,000 bracket with a mean income of $6,102, $1,969 is subtracted so that the new average income for the bracket is $4,133.[7]

[6] See Appendix A.

[7] An alternative to our technique of redistributing income toward the mean was suggested by the fact that Chart II shows a fairly sharp change in the slope of the income-expenditures line at the $2,000–3,000 bracket. This would seem to indicate that the greatest effectiveness would be obtained by redistribution toward the average income for that bracket, since the differences between the marginal propensities are greatest above and below that point. However, the results upon aggregate expenditures of such redistribution are little different from our previous redistributions, principally because the average income for the $2,000–3,000 bracket ($2,459) is fairly close to the general average ($2,163). Data for this alternative procedure are, therefore, not presented.

Some evaluation of the severity of the various degrees of redistribution is necessary. In terms of tax burden, the 50 per cent redistribution case amounts to an added tax levied in addition to 1941 personal taxes. The new tax would be a 50 per cent rate without exemptions on income above $2,163 remaining after paying 1941 income taxes. For income brackets above this level, it would thus be a far heavier tax than the heaviest federal income tax ever enacted in the United States, that in effect in 1943–45. For disposable incomes well below $2,163, redistribution by a 50 per cent movement toward the mean would be equivalent to remission of all direct taxes in effect in 1941 and contribution of sizeable cash payments in addition. The 10 per cent redistribution would imply taxes lighter on all income groups than during 1943–45. However, it would reduce 1941 taxes on groups

TABLE II.—PERCENTAGE OF NON-FARM FAMILIES BY INCOME BRACKET (1941), BEFORE AND AFTER REDISTRIBUTION

Bracket	Per Cent Movement Toward Mean			
	0	10	50	100
0– 1,000	22.3	19.0	3.0	0
1,000– 2,000	32.9	35.0	47.0	0
2,000– 3,000	26.6	28.0	40.0	100
3,000– 5,000	13.6	14.0	8.0	0
5,000–10,000	3.4	3.0	1.7	0
10,000–over	1.2	1.0	.3	0

below the mean while raising them on higher groups. Even this change would involve greater redistribution than that of the wartime federal income tax.[8] As a further measure of severity, changes in the approximate distribution of families by disposable income brackets which might be brought about by our redistributions are shown in Table II.

Effects of Redistribution

Three new distributions are obtained by the 10, 50 and 100 per cent movements toward equality. For these distributions total income is broken down between consumer expenditures and savings by applying for each average income the income-savings relationship of the basis distribution. Table III shows the percentage changes in total expenditures and savings which result. These changes are shown as percentages since the absolute figures depend upon the size of the sample and have no general significance. Since aggregate savings are much smaller than aggregate expenditures, a small error in estimated change in savings will make a large percentage difference. The percentage change in expenditures, the more reliable figure, is therefore used as our measure of the effectiveness of redistributing income.

Strictly speaking, the percentages apply only to the 1941 savings-expendi-

[8] These comments use the concept of distribution of income in a very loose sense. No attempt has been made to define the degree of reduction in inequality of income in the more rigorous sense in which the term inequality is used by Gini.

ture situation, or to a distribution of disposable income identical with that in 1941, in which the average and marginal rates of expenditures are the same for each family at a given position on the Lorenz curve as for the comparable family in 1941. However, the percentages of change in expenditures may be taken as a rough measure—but not too rough for our purpose—of the effect of redistribution in any recent or probable near-future United States income distribution.

The conclusion to be drawn from our data at this point is evident: no redistribution of any feasible severity will bring about a large enough change in aggregate expenditures to offer a major contribution to the problem of increasing total demand. If this conclusion is valid, it is of great social and economic importance since income redistribution is one of the basic methods by which

TABLE III.—EFFECTS ON EXPENDITURES AND SAVINGS OF INCOME REDISTRIBUTION: ALL FAMILIES

Extent of Redistribution	Per Cent Increase in Expenditures	Per Cent Decrease in Savings
100% toward equality	4.1	59.4
50% toward equality	2.4	34.7
10% toward equality	.5	7.2

many liberal economists believe the economic system can be made to work. Our data seem to demonstrate that income redistribution by itself would not make a major change in the magnitude of the problem.

Before such a conclusion may be drawn categorically, however, the data must be examined further.

Low Income Dissaving

The small increase in aggregate expenditures is due in great part to the phenomenon of average dissavings below an income of about $1,300. The tendency to dissave in the lower brackets shows up clearly in Table I. As explained before, it means that an increase in income going to low-bracket consumers will only partly be reflected in increased expenditures, the rest being reflected in a reduction of dissaving.

The phenomenon of continued low-income dissaving requires some explanation. At first glance it is difficult to see how families are able to live from year to year increasing their debts continually (although it is just as difficult to see how they can live on such small incomes at all!). Except for some retired people, families with low incomes are not in possession of large savings, particularly if they continue to dissave. And presumably there must be some limit to the amount of credit the corner grocery store will give. Two possible explanations present themselves. One might be that the low-income brackets do not include the same people at all times, that the individual families in the brackets vary from year to year. The other might be that reported income in the low-income brackets is understated.

If it were true that the low income groups include a large portion of fami-

lies which remain in these brackets only temporarily, the excess of expenditures over income might conceivably be explained by a tendency of expenditures to lag behind when income falls. Dissaving for any individual family would be just temporary while its income declines, although for the average of all families in each bracket dissaving might be continuous. However, to obtain dissavings for the bracket average, it must be assumed that there are more people whose incomes fall than there are whose incomes rise or that there is a greater lag when incomes fall than when incomes rise. The first assumption is obviously correct for the lowest income group, if shifts in income are large. There is no certain proof for either proposition. Since the 1941 income study was made during a period of generally rising income when most families moved to higher rather than lower levels of income, a downward expenditure lag seems questionable as a general explanation for the dissavings phenomenon.

Data for Families with Stable Income

However, in order to eliminate any possible distortion of the data by unstable families, our experiments were applied to families with relatively stable income, defining a relatively stable income as one which changed by less than 5 per cent from the preceding year.

TABLE IV.—AVERAGE INCOME AFTER DIRECT TAXES, AVERAGE EXPENDITURES AND AVERAGE SAVINGS BY INCOME BRACKET: FAMILIES WITH STABLE INCOME

Income Bracket	Average Income	Average Expenditures	Average Savings
0– 500	328.7	361.2	−32.5
500– 1,000	736.9	783.5	−46.6
1,000– 1,500	1,253.3	1,245.6	7.7
1,500– 2,000	1,722.6	1,625.3	97.3
2,000– 3,000	2,399.9	2,252.2	147.7
3,000– 5,000	3,683.3	3,218.4	464.9
5,000–10,000	6,018.7	4,792.4	1,226.3
10,000–over	11,079.2	7,950.2[a]	3,129.0

[a] Expenditures adjusted downward.

The 1941 survey, apart from detailed data for 1941, also obtained from each respondee a rough estimate of his 1940 income. These estimates were probably not very accurate, but are all that are available. Since no estimates of total taxes for 1940 were included, to obtain disposable income it was necessary to make an estimate of direct taxes in 1940, based on adjustment of the 1941 taxes. Those families whose disposable incomes had changed by more than 5 per cent were then dropped out and the distribution in Table I was reconstructed including stable families only.[9] The new distribution is presented in Table IV.

[9] Average expenditures in the $10,000 and over income bracket were adjusted downward, since the sample for the top bracket was extremely small and the resulting average expenditure looked suspiciously high.

Comparison of the income-expenditure pattern of the all families and stable families distributions shows that the marginal propensities to consume at various income levels are similar for the two groups. It is interesting in particular that this also holds for the lowest income brackets since dissaving is present for the stable families as well. When the three redistribution cases are applied to the stable income distribution,[10] the similarity between the two groups of families is clearly shown. The results are summarized in Table V.

TABLE V.—EFFECTS ON EXPENDITURE AND SAVINGS OF INCOME REDISTRIBUTION, BY TYPE OF REDISTRIBUTION: FAMILIES WITH STABLE INCOME

Type of Redistribution	Per Cent Increase in Expenditures	Per Cent Decrease in Savings	Per Cent Increase in Expenditures, All Families, from Table II
100% toward equality ($2,104)	3.3	33.5	4.1
50% toward equality	2.2	22.1	2.4
10% toward equality	.5	5.3	.5

The percentage increases in expenditures brought about by transferring income from high to low brackets in the "stable income" distribution are slightly smaller, not larger, than those for the all families distribution. The percentage decreases in savings for the stable families, however, are much smaller since the estimated reduction in dollar savings is about similar for both cases, while aggregate savings before redistribution are much larger for stable families.

It must be cautioned that the data used for the stable family estimates are very poor. Nevertheless, comparison of the two estimates seems to indicate that expenditure lags are not very important in explaining dissavings in the lower income groups.

Reliability of the Data

The second possible reason to question the tentative conclusion is that basic data obtained in the 1941 survey may be incorrect. The data for the individual respondees was checked as carefully as possible by the survey enumerators with data on changes in net worth of the respondees at the end of the year. Changes in net worth were obtained from a table of items entering into changes in assets and liabilities during the year and the enumerators were careful to see that the sum of expenditures and net changes in assets

[10] For the purposes of redistribution, the average income and expenditures for stable families as shown in Table IV are used but the same family distribution by numbers is retained as applied to the all family case. Otherwise the results would not have been comparable. Since the income in each bracket is slightly lower for families with stable income than for all families, aggregate income in the revised distribution is somewhat reduced and the new mean income for the entire distribution is $2,104. Aggregate savings, on the other hand, are larger in the revised distribution because of the greater reduction in aggregate expenditures than in aggregate income.

came within 5 per cent of the total reported income. Nevertheless, a strong possibility of reporting errors in incomes and changes in net worth is inherent in the way the schedules were devised. The interview schedule was set up to get a much more detailed picture for expenditures than for income and for net changes in assets and liabilities. The figures for income by source and for net worth were obtained for the entire past year while expenditures were obtained by shorter time periods, by numbers of items, expense of each item, and so on. Summation of these details, item by item, makes the expenditures estimate fairly accurate. Estimates based upon memory of total income gained by intermittent employment during the year leave a much greater margin for error, especially in the low-income groups where employment is most discontinuous.

When a reconciliation of income and net worth figures is made by considering one as a residual of the other, even if done by the respondee but at the behest of the interviewer, there is some danger of merely rationalizing an error in the first estimate. There are a number of items in the list of the components of net worth where faulty memory is perhaps as likely as in estimating income. Accurate figures on such items as money on hand, amounts due on various kinds of debts, payments and balances on installment purchases, and perhaps even bank accounts are difficult to remember. Thus even if the expenditures estimates are reliable, an important check on the respondees' estimates of their incomes for the past year is open to the same sort of errors as are the income estimates.

However, income reported by employers to the Social Security Board may be used as a further check on the estimates of income recorded by interviewers. Since the coverage of consumers by social security is wide, although far from complete, it is possible to make use of social security records to compare incomes reported by employees with those shown by employers' records. Particularly for low-income consumers with casual incomes, the presumably accurate records of the Social Security Board can be used as a check on incomes reported by consumers to the extent that income is earned in covered employment.

Evidence from Old Age and Survivors' Insurance Records

A comparison has been made by the Social Security Board of data obtained from a 1939 census study and from records of the Bureau of Old Age and Survivors' Insurance. This comparison presents an important clew. It suggests that the excess of expenditures over income in the lower brackets reported in income surveys may be due to progressively greater understatement of income by consumers, the lower their average income.

The OASI study compares data on taxable wages and total wage incomes reported in a trial census of population of two Indiana counties for 1939 with corresponding data for the same individuals from the old age and survivors' insurance records. If both reports were accurate, on the average incomes reported to the census would be higher than the recorded incomes in the old age and survivors' insurance files, since presumably not all the work done by employees would have been done in jobs covered by govern-

ment insurance. This was expected to be most pronounced in the low-income groups where employment is highly irregular. The comparison showed, however, that incomes reported by individuals in the lower-income groups were *below* the incomes recorded for them in the old age and survivors' insurance records. In other words, low-income individuals on the whole understated their income and, interestingly enough, the degree of understatement increased the lower the income bracket.

Table VI shows the ratios by income bracket of income understatement obtained in the Social Security Board comparison of census and old age and survivors' insurance reports. The ratio of understatement is defined as taxable income recorded by employers divided by the income reported to the census interviewers. These ratios are conservative estimates of underreporting which actually occurred, since some income will have been earned in jobs not covered by the old age and survivors insurance.

TABLE VI.—RATIO OF OASI TAXABLE INCOME TO REPORTED INCOME, BY INCOME BRACKET

Income Bracket	Ratio of OASI Taxable Income to Reported Income
$ 0– 500	121.4%
500–1,000	116.4
1,000–1,500	111.1
1,500–2,000	102.7

If this tendency toward understatement of income by low-income groups is general, it may also apply to the BLS survey. Hence, it will be of interest to test the extent to which this may affect our preceding estimates. If income for the low-income families was progressively more underreported, at decreasing levels of income, appropriate correction of the data would change the income-expenditure relation in such a way that in the lower income brackets a greater increase in expenditures would accompany each increase in income. Graphically, the income-expenditure curve would become more concave downward. Redistribution of income then would result in larger increases in consumption expenditures.

For purposes of experiment it may be useful to apply the measures of income understatement of Table VI to the 1941 study and observe the resulting effect on redistribution. Presumably the 1941 study was conducted with greater precision than the trial survey in 1939, so that the data obtained were more nearly accurate. Application of the understatement ratios to the 1941 survey income figures may, therefore, be regarded as the extreme upper limit for correction of errors on the part of the respondees.

Redistribution of Incomes Adjusted by Old Age and Survivors' Insurance Ratios

Accordingly, average incomes in Table I were adjusted by the ratios in Table VI while average expenditures in Table I were left unadjusted. This process, of course, raised both aggregate income and aggregate savings. A

new savings figure for each bracket was derived by deducting the reported expenditures figure from the raised income figure, thereby changing the income-savings relationship considerably and greatly reducing the amount of dissavings. Table VII presents the distribution in Table I after this adjustment.

TABLE VII.—AVERAGE INCOME AFTER DIRECT TAXES, AVERAGE EXPENDITURES, AND AVERAGE SAVINGS BY BRACKET: INCOME AND SAVINGS ADJUSTED FOR UNDERREPORTING[a]

Income Bracket	Average Income	Average Expenditures	Average Savings
$ 0– 500	389.8	408.5	−18.7
500– 1,000	862.1	797.1	65.0
1,000– 1,500	1,391.0	1,286.0	105.0
1,500– 2,000	1,798.5	1,697.5	101.0
2,000– 3,000	2,458.7	2,400.9	57.8
3,000– 5,000	3,693.5	3,370.1	323.4
5,000–10,000	6,101.7	4,925.8	1,175.9
10,000–over	13,561.1	9,580.0	3,981.1

[a] Incomes and savings in the four brackets between $0 and $2,000 adjusted by understatement ratios of old age and survivors' insurance. Expenditures unadjusted.

The three redistribution cases were again applied to Table VII and the results are summarized in Table VIII. The resulting percentage increases in expenditures are now considerably greater than in the preceding experiments. The relatively mild redistribution exemplified by the 10 per cent shift results in a 2.9 per cent increase in expenditures, as compared with .5 per cent in Table II. Moving all incomes 50 per cent toward equality results in an increase in expenditures twice as great as before.

TABLE VIII.—EFFECTS ON EXPENDITURES AND SAVINGS OF INCOME REDISTRIBUTION, BY TYPES OF REDISTRIBUTION: ALL FAMILIES, ADJUSTED FOR UNDERREPORTING OF INCOME

Type of Redistribution	Per Cent Increase in Expenditures	Per Cent Decrease in Savings	Increase in Expenditures ($ billions)
100% toward equality	6.7	70.5	9
50% toward equality	4.7	50.0	6
10% toward equality	2.9	30.5	4

Using the assumption of a gross national product of 200 billion dollars, disposable income of 150 billions, and consumer expenditures of 135 billions, figures for aggregate changes in expenditures are included in Table VIII.

The 10 per cent redistribution might mean an increase in total expenditures of 4 billions, compared with an estimated increase of one billion on the basis of our original data which included heavy dissaving. The magnitudes are still not spectacular, but are certainly significant.

Conclusion

The data from the 1941 study of consumers' income and expenditures seem to caution against placing too much faith in the theory that income redistribution will greatly decrease the volume of savings in the economy. These data are the best we have to date, and until better data are available the conclusion drawn from them cannot be disregarded. However, two things should be kept in mind.

Available data on which estimates of this kind can be based are thoroughly inadequate for any definite judgment. Application of the old age and survivors' correction ratios shows that even fairly slight errors in reporting may affect the results considerably. Future income surveys should make use of the data available from the old age and survivors' insurance records as a check on the accuracy of the survey data. Furthermore, the case for and against income redistribution depends not only upon the considerations included here. Other aspects, such as the welfare effects of a more equal income distribution must also be considered.

APPENDIX A

The Sample

The Bureau of Labor Statistics-Bureau of Home Economics sample consisted of 1,007 urban families and 871 rural non-farm families. Of these, 211 urban and 464 non-farm had incomes which changed less than 5 per cent from the preceding year. Since the number of rural non-farm families was not in the same ratio to the number of urban families in the sample as in the actual population as estimated by the Office of Price Administration, the number of urban families in each bracket was multiplied by the appropriate factor, 2.595, in order to get the same ratio of rural non-farm to urban families in the sample as in the estimate of the total population.

The decision to include only non-farm families was taken for several reasons. In the first place, the sample of single individuals seemed too small for any further breakdowns which might have been necessary. Far more important, farmers and single individuals were left out in order to redistribute the incomes of a relatively homogeneous group. Farmers and single individuals differ greatly from non-farm families, with respect to both income distribution and expenditure patterns. Both farmers and single individuals in general have lower money incomes than non-farm families. Combining all the groups would weight the lower brackets heavily with the expenditure pattern of farmers and single individuals, who in general save a greater portion of their incomes than non-farm families.

Ideally, our study should show what change would take place in spending by each family and each individual in the country if no change took place in his socio-economic status, other than the change in his income caused by redistribution. We want to isolate the effect of income redistribution. But if all groups were combined in the sample used, redistribution of income would have the effect of causing many single persons and farm families to assume the spending characteristics of non-farm families, thus exaggerating the

increase in expenditures. We would be testing the combined effect on expenditures of income redistribution, marriage, and farm-non-farm migration. To avoid this statistical aberration, only non-farm families were used. A complete study would of course redistribute income within each type of consumer units, and combine the results. The procedure used seemed the most desirable simpler alternative.

HAROLD LUBELL*

* Mr. Lubell at the time of writing this paper was a member of the research staff of the Board of Governors of the Federal Reserve System. He is at present a student at the Graduate School of Public Administration, Harvard University.

Obligations upon the Union under the National Labor Relations Act

The National Labor Relations act has generally been considered to confer rights upon the employees, exercised through organization and the selection of representatives, and running against the employer. The act has been criticized on the ground that it imposes no obligations upon the union in the interests of its employee-members, whom it is supposed to represent. Several recent decisions of the National Labor Relations Board and of the courts raise the questions whether, in fact, the act cannot be so construed as to place such obligations, and, if the answer is in the affirmative, what the extent of those obligations may be.

The source of any possible compulsions upon the union is to be found in Section 9(a), which states that "Representatives designated or selected for the purposes of collective bargaining by the majority of employees in a unit appropriate for such purposes, shall be the exclusive representatives of all the employees. . . . " Until recently the emphasis in this section had been laid upon the word "exclusive," in an elaboration and defense of the doctrine of majority representation, both with respect to negotiations for the contract and grievance proceedings. It now appears that considerable weight is being accorded the phrase "representatives of all the employees," and that this additional emphasis carries implications perhaps hitherto unforeseen.

In *Hughes Tool Co.* v. *NLRB*, (1945) 147 F. (2d) 69, at 74, the Fifth Circuit Court thus took pains to point out that "When the Steelworkers union accepted certification as the bargaining representative for the group, it accepted a trust. It became bound to represent equally and in good faith the interests of the whole group. It ought not to discriminate in the execution of its duties between its own members and employees who belong to another union or to no union. The handling of grievances, as has been pointed out, is part of the business it has assumed, and must be done with impartiality."

If it thus becomes established that in accepting Board certification as *exclusive* representative for the employees in a unit a union becomes subject to the burdens of a trusteeship, it is altogether conceivable that failure to discharge such trusteeship obligations may become grounds for revocation of certification.

Consider *Matter of Monsieur Henri Wines*, 44 NLRB 1310. In this in-

stance the employees of a small wine merchant (Feinberg) sought membership in Local 1 of the Distillery, Rectifying and Wine Workers International Union. Before membership was granted, they designated the union as their bargaining agent, and union officials thereupon concluded a closed shop agreement with the employer, denied membership to the employee-applicants, secured their discharge under the closed shop agreement and filled their positions with unemployed members of the union. The employer readily acceded to this course of action and may even have been the moving party. In this case the Board ruled:

> It is true, and we find, that on the day preceding the execution of the agreement a majority of the employees designated Local #1 as their bargaining agent. Such designation would normally, under the proviso [closed shop proviso of Section 8(3)], empower an agent, which had not been assisted by unfair labor practices, to enter into an agreement requiring membership as a condition of employment. But the proviso was not intended, nor may it be construed, to legalize a conspiracy between the designated agent and the employer fraudulently to deprive of employment all the employees, including those upon whose designations the agent's authority depends. That is manifestly the situation with which we are confronted. When the employees delivered their application cards to Pross [union agent] he assured them that they were "as good as in," and that the Local would proceed to bargain on their behalf. [The Board notes here: That the Local would refrain from bargaining against their interest was in any event implicit in its acceptance of their applications.] But it is evident, and we find, both from the course of events and from remarks made by Oneta [union official] and Feinberg [employer] on the day when the agreement was executed, that when the parties executed the agreement it was not intended that the employees should be admitted to membership in Local #1, and that the purpose of the agreement was to close the shop against them and to distribute their jobs to non-employee members of the Local.
>
> Local #1 thus repudiated its representative status, using the designation solely as a device to legalize its fraud.

In this case the remedy ran against both union and employer, though nominally only against the latter, since reinstatement with back pay was ordered and the closed shop contract invalidated. It is difficult to conceive, however, that even had the employer been innocent of complicity the contract would have been allowed to stand and its results inure against the employees on whose behalf it presumably was to have been negotiated.

Wallace Corporation v. *NLRB*, 65 S. Ct. 238 (1944), is a case with many similar circumstances which came before the Supreme Court for decision. In an election between an independent and a CIO union, the former won and thereupon negotiated a closed shop agreement and sought the discharge of CIO employees. The Court majority declared:

> The duties of a bargaining agent selected under the terms of the Act extend beyond the mere representation of the interests of its own group members. By its selection as bargaining representative, it has become the agent of all the employees, charged with the responsibility

of representing their interests fairly and impartially. Otherwise employees who are not members of a selected union at the time it is chosen by the majority would be left without adequate representation. No employee can be deprived of his employment because of his prior affiliation with any particular union. The Labor Relations Act was designed to wipe out such discrimination in industrial relations. Numerous decisions of this Court dealing with the Act have established beyond doubt that workers shall not be discriminatorily discharged because of their affiliation with a union. We do not construe the provision authorizing a closed shop contract as indicating an intention on the part of Congress to authorize a majority of workers and a company, as in the instant case, to penalize minority groups of workers by depriving them of that full freedom of association and self-organization which it was the prime purpose of the Act to protect for all workers. It was as much a deprivation of the rights of these minority employees for the company discriminatorily to discharge them in collaboration with Independent as it would have been had the company done it alone. . . .

The minority opinion of Mr. Justice Jackson is interesting, too, in that it recognized a possible right on the part of the Board to impose conditions upon the certified bargaining agent.

We do not mean to preclude the power of the Board, when the contract settling the strike, withdrawing charges against the company, and consenting to an election with a closed shop to the winner was brought to the Board, to have refused to dismiss charges and undertake an election unless each union agreed that, if it won a closed shop, it would open the union to membership from the losers on terms the Board deemed fair. Since no one could tell who would win, this would in any event have been an impartial arrangement. Even after the Independent won, the Board before certifying it might perhaps properly have made conditions as to reasonable terms to the defeated.

Mr. Jackson goes on to note: "This and the other cases before us give ground for belief that the labor movement in the United States is passing into a new phase. The struggle of the unions for recognition and rights to bargain, and of workmen for the right to join without interference, seems to be culminating in a victory for labor forces. We appear now to be entering the phase of struggle to reconcile the rights of individuals and minorities with the power of those who control collective bargaining groups."

The question of minority representation has been raised by the Board, but not settled, in situations where a union seeking certification discriminates among its membership as to the nature of the rights which membership confers. In *Matter of R.K.O. Radio Pictures*, 59 NLRB 132, an independent union petitioned for a bargaining unit including only movie extras, while the competing Screen Actors Guild asked a unit comprising all who worked before the camera. In establishing a separate unit for extras, the Board placed heavy emphasis upon the Guild by-laws which divided its membership into three classes, the third class for extras having voting rights only in certain instances and even then restricted. "It is apparent," the Board

said, "that essential control of the Guild is effectively retained by its Class A members." Inasmuch as the Board allowed the Guild a place on the ballot, even after relying on the differential membership privileges to split off a separate bargaining unit, it did not examine into the question of whether the Guild could adequately represent extra employees, if elected, if full membership privileges were denied them. This question it has raised, however, in instances of racial discrimination.

In *Matter of Bethlehem-Alameda Shipyards*, 53 NLRB 999, 1015, the Board declared:

> We entertain grave doubts whether a union which discriminatorily denies membership to employees on the basis of race may nevertheless bargain as the exclusive representative in an appropriate unit composed in part of members of the excluded race. Such bargaining might have consequences at variance with the purposes of the Act. If such a representative should enter into a contract requiring membership in the union as a condition of employment, the contract, if legal, might have the effect of subjecting those in the excluded group, who are properly part of the bargaining unit, to loss of employment solely on the basis of an arbitrary and discriminatory denial to them of the privilege of union membership.

Similarly, in *Matter of Carter Manufacturing Company*, 59 NLRB 804, 806, where a union had urged racial discrimination in membership as a bar to the petition for certification on the part of a contending union, the Board ruled:

> In the absence of proof that the Union discriminatorily denies membership to employees in the appropriate unit because of their race, we see no reason to dismiss its petition. However, if it is later shown, by an appropriate motion, that the Union has denied equal representation to any such employee because of his race, creed, color or national origin, we will consider rescinding any certification which may be issued herein.

It must be noted that in this case the Board was concerned with the relationship between its action and the President's Executive Order No. 9346, amending Executive Order No. 8802, establishing non-discrimination on the basis of race in unions as public policy. In the light of other Board and court decisions, however, it may be questioned whether the absence of such an executive order would have affected materially the Board's position.

Other cases have arisen which have not concerned the Board or its administration of the National Labor Relations Act, but which have similarly hinged on the obligations of the majority representative. The prevailing trend is definitely ascertainable as establishing duties on such representatives. According to one line of thought the obligations do not stop with a proper fulfillment of trusteeship. The privilege of unions to choose their own members is being transformed by those with the broader view into a right of workers to membership in the union which represents them. Thus in *James v. Marinship Corporation*, 155 Pac (2d) 329, the California Supreme Court asserted that where a union has attained a closed shop status,

"such a union occupies a quasi public position similar to that of a public service business and it has certain corresponding obligations. It may no longer claim the same freedom from legal restraint enjoyed by golf clubs or fraternal associations. Its asserted right to choose its own members does not merely relate to social relations; it affects the fundamental right to work for a living." In this case, the Court gave the Boilermakers International Union the choice of surrendering its closed shop contract or of according to negroes the right of membership with full privileges. The establishment of "auxiliaries" in a dependent status was considered insufficient performance of obligation, on the four grounds that a controlling local managed and supervised the affairs of the auxiliaries, the auxiliaries were not allowed business agents of their own but were required to act through the business agents of the controlling local, their members could be dispatched to employment only through the controlling local, and they possessed an impermanent status since the international union retained powers of dissolving them at will.

This trend of thinking has been evident in cases arising under the Railway Labor Act. In *Brotherhood of Railway and Steamship Clerks* v. *United Transport Service Employes*, 137 F. (2d) 817, a group of redcaps, ineligible to membership in the union certified as exclusive bargaining agent, who sought to bargain on their own behalf but were rebuffed by the National Mediation Board, petitioned for the intervention of the Court. The Court declared:

> They [the employees] have the right to organize *and* bargain collectively through representative of their own choosing, which carries the corollary that the right to organize is essential to the right to bargain collectively. And yet the employees in the case at bar are ineligible to organize with the only labor union that their employer will recognize as their bargaining agent.

And Chief Justice Groner, in his concurring opinion, used even stronger language:

> The effect of the action of the [National Mediation] Board is to force this particular group of employees to accept representation by an organization in which it has no right to membership, nor right to speak or be heard in its own behalf. This obviously is wrong and, if assented to, would create an intolerable situation. That the rules of the Brotherhood make negroes ineligible to membership is not a matter which concerns us, but that the Brotherhood, in combination with the employer, should force on these men this proscription and at the same time insist that Brotherhood alone is entitled to speak for them in the regulation of their hours of work, rates of pay and the redress of their grievances is so inadmissible, so palpably unjust and so opposed to the primary principles of the Act as to make the Board's decision upholding it wholly untenable and arbitrary. The purpose of the Act, as is apparent on its face, and has been recognized and confirmed by the Supreme Court and this court in many decisions, is to insure freedom of choice in the selection of representatives. While it is true that this purpose has been held to yield, when necessary, in the interest of uniformity of classification in accordance with established custom [the

> question of appropriate bargaining unit], nothing in the Act nor in its construction by the courts can be found to justify such coercive action as to force upon any class of employees representation through an agency with which it has no affiliation nor right of association. It is, therefore, of no consequence that the porters were at one time dependent upon Brotherhood as their spokesman with the railroad, for that was never a trusteeship of their own making. To perpetuate it by law would be to impose a tyranny in many respects analogous to "taxation without representation."

It is to be noted that the above decision was reversed by the Supreme Court, 320 U.S. 715, though on the purely jurisdictional ground that no justiciable issue was involved. Nevertheless, it is apparent from the Supreme Court's opinion in the *Steele* case, to be cited shortly, that it has not yet accepted the view that the obligation resting on the exclusive bargaining agent extends to the duty of admitting to membership all employees within the scope of the unit. There thus appear to be two general doctrines emerging with respect to the obligations upon the majority representative, one which may be called the "trusteeship doctrine," more limited in its application, requiring primarily good faith representation of all employees within the unit; the other, which may be called the "public service doctrine," more sweeping, holding that the majority representative must open its ranks to all represented employees on equal terms, or cease to represent those whom it will not admit, permitting them to bargain on their own behalf.

The decisions most generally known which apply the trusteeship doctrine are those rendered by the Supreme Court in *Steele* v. *L. and N. Railroad*, 323 U.S. 192, and *Tunstall* v. *Brotherhood of Locomotive Firemen and Enginemen*, 323 U.S. 209. In the *Steele* case, the Brotherhood, certified as sole representative and purporting to act for all firemen in the unit, concluded a contract with the railroad under which only "promotable" men should be employed as firemen. The result would have been to exclude negroes from employment as firemen, since practice prevented their promotion to positions as engineers. Negro firemen were not notified nor consulted as to this proposal, nor as to subsequent contract amendments limiting the number of negroes in each seniority district and otherwise restricting their employment rights. The court held:

> While the majority of the craft chooses the bargaining representative, when chosen it represents, as the Act by its terms makes plain, the craft or class, and not the majority. The fair interpretation of the statutory language is that the organization chosen to represent a craft is to represent all its members, the majority as well as the minority, and it is to act for and not against those whom it represents. It is a principle of general application that the exercise of a granted power to act in behalf of others involves the assumption towards them of a duty to exercise the power in their interest and behalf, and that such a grant of power will not be deemed to dispense with all duty toward them for whom it is exercised unless so expressed.
>
> We think that the Railway Labor Act imposes upon the statutory representative of a craft at least as exacting a duty to protect equally

> the interests of the members of the craft as the Constitution imposes upon a legislature to give equal protection to the interests of those for whom it legislates. Congress has seen fit to clothe the bargaining representative with powers comparable to those possessed by a legislative body both to create and restrict the rights of those whom it represents, *cf. J. I. Case Co.* v. *Labor Board, supra*, 335, but it has also imposed on the representative a corresponding duty. We hold that the language of the Act to which we have referred, read in the light of the purposes of the Act, expressed the aim of Congress to impose on the bargaining representative of a craft or class of employees the duty to exercise fairly the power conferred upon it in behalf of all those for whom it acts, without hostile discrimination against them.

And the Court, elaborating upon such an obligation, subsequently adds that "Whenever necessary to that end, the Union is required to consider requests of non-union members of the craft and expressions of their views with respect to collective bargaining with the employer and to give to them notice of and opportunity for hearing upon its proposed action." Here indeed begins the spelling out of the obligation.

It is worthy of noting that Mr. Justice Murphy, in his concurring opinion, 208–209, goes on to say: " . . . I am willing to read the statute as not permitting any action by the bargaining representative in the exercise of its delegated powers which would in effect violate the constitutional rights of individuals."

One may thus conclude that the clearest cases involving imposition of obligations upon the union certified as exclusive bargaining agent have arisen in connection with instances of racial discrimination. But it is equally clear that this is no logical stopping point in the application of the doctrine, as is suggested by several of the cited decisions of Board and courts. The implications are far more sweeping. Consider, for example, all that is implied in the statement of the court in *James* v. *Marinship Corporation*, cited above: "While it is true that a minority may properly be outvoted, minority members are nevertheless entitled to vote and participate in the affairs of the whole group." Is legal form only involved? Will the Board and the courts accept statements of intent, as may be included in union constitutions, as sufficient evidence of compliance with this obligation, or will they examine into the facts of the situation to see if the rights of membership are in fact being accorded? It is no secret that certain unions have harbored dictatorial leadership denying elementary rights of union citizenship to their members. The report of the American Civil Liberties Union on *Democracy in Trade Unions*, published in 1943, provided an unbiased account of such practices. Is it now to be expected that decisions of the NLRB and the federal courts, at some future date, will consider evidence of such denial of the right "to vote and participate in the affairs of the whole group" germane to the question of certification of an exclusive employee agent? Phrased in these terms, the step seems a long one. Considering existing decisions and their full implications, however, that step might appear to be only the next movement

along the path of defining group relationships, with sufficient momentum established that it cannot be arrested.

It is true that such sweeping questions are raised primarily by the public service doctrine of obligation, which we have seen has not yet been accepted by the Supreme Court. An expectation that sooner or later this doctrine will absorb the trusteeship view and preëmpt the field may be based, however, on the increasing extension of the union and closed shops. One writer, Jerome Toner, in his book *The Closed Shop* (1941) comes to the conclusion that "The closed shop will probably be the rule rather than the exception within the next decade." Since the union and closed shops almost demand an accompanying fine sense of democratic organization, the pressure to assure democracy within unions before giving them the governmental sanction of exclusive representation for all employees will be great.

As the court said in *Carroll* v. *Local No. 269*, 133 N.J. Eq. 144: "If the union can force a closed shop upon all, or almost all, of the employers of an industry or area, the right to employment will depend upon union membership; and if union membership be refused the workman, he is more totally excluded from the opportunity to labor than he was before recognition." More might be added. If union members were compelled to "stay in line" because of the threat of suspension or expulsion, and an attendant loss of employment, possibilities of employment regimentation are opened scarcely less condemnable than those practiced by autocratic employers.

The dangers of such a policy of administrative or judicial determination of the degree of democracy within unions, if it should emerge, must not pass unnoticed, however. Unless standards of democracy are established, the unions may be subject to governmental dictation as to the conduct of their affairs, and open to attack by employers seeking to undermine their status.

The heart of the difficulty perhaps lies in the fact that unions, for all that the Wagner Act has accomplished, have not yet been integrated into our industrial society. They are still on the periphery of our industrial organizations, carving out a place for themselves in the conduct of those organizations only in so far as they can force their views upon management through threat of strike. In this state of affairs greatest attention has been given to their strength before the employer, rather than a democratic basis for their power. Mr. Justice Jackson is quite right when he notes that we now appear to be entering a phase of reconciling individual and minority rights with the rights and power of those in control. But in the industrial sphere, it is quite probable that no real solution to that reconciliation will be found until the unions achieve a status within industry that is not dependent upon an exercise or threat of force.

NEIL W. CHAMBERLAIN*

* The author is research assistant on the staff of the Labor and Management Center, Yale University.

The Terms of the Anglo-American Financial Agreement*

Though much has been written in general terms on the broad implications of the Anglo-American Financial Agreement, relatively little detailed attention has thus far been given to its specific provisions. Yet the meaning of those provisions is by no means always obvious, even to the careful reader. The object of the present analysis, accordingly, is to attempt to deduce, from a close scrutiny of the language used, and from such external evidence as is available, the significance of those parts of the agreement which appear to require clarification.

I. *Waiver of Interest*

The conditions under which the British Government is absolved from the payment of interest (there are no provisions for waiver of principal) are set forth in Section 5, in what is probably the most involved language in the Agreement.[1] In order that Great Britain might be able to claim a waiver of interest (which, it is to be noted, is a final surrender, not a mere deferment) *both* of two conditions must be satisfied. The *first*, contained in paragraph (a) of Section 5, in effect is that, in the judgment of the British Government (1) payment of the interest due would leave Britain with inadequate international reserves and (2) present or prospective conditions of multilateral clearing are such that Britian is or will be unable to get dollars for a large part of her export proceeds. The *second* condition, contained in 5(b), assures Britain that she will not be burdened with the payment of interest on the loan when her exports of goods and services are running at a rate below that necessary to provide her with her pre-war volume of imports. This clause is the really significant part of the waiver provision since

* The subject treated in this paper (written in August, 1946) is the ***Financial Agreement between the Governments of the United States and the United Kingdom***, signed December 6, 1945, providing for a line of credit of $3,750,000,000 to Britain. The lend-lease and surplus property settlement reached at the same time is not discussed. All citations of the text of the Agreement are from ***Anglo-American Financial and Commercial Agreements***, State Department Pub. 2439.

[1] The text of Section 5 is as follows:

5. *Waiver of interest payments.* In any year in which the Government of the United Kingdom requests the Government of the United Sates to waive the amount of the interest due in the installment of that year, the Government of the United States will grant the waiver if:

(a) the Government of the United Kingdom finds that a waiver is necessary in view of the present and prospective conditions of international exchange and the level of its gold and foreign exchange reserves *and*

(b) the International Monetary Fund certifies that the income of the United Kingdom from home-produced exports plus its net income from invisible current transactions in its balance of payments was on the average over the five preceding calendar years less than the average annual amount of United Kingdom imports during 1936–38, fixed at £866 million, as such figure may be adjusted for changes in the price level of these imports. Any amount in excess of £43,750,000 released or paid in any year on account of sterling balances accumulated to the credit of overseas governments, monetary authorities and banks before the effective date of this Agreement shall be regarded as a capital transaction and therefore shall not be included in the above calculation ot the net income from invisible current transactions for that year. If waiver is requested for an interest payment prior to that due in 1955, the average income shall be computed for the calendar years from 1950 through the year preceding that in which the request is made.

it sets up an automatic criterion and does not depend on the discretion of the British Government.

It should be emphasized that the criterion of £866 million established in this section refers only to ***exports and net current credits from invisibles***, even though this amount is to be adjusted for changes in the prices of the goods *imported* into Great Britain in 1936–38.[2] Neither the value or volume of imports, nor Great Britain's balance of payments, in any year during the life of the Agreement, enters directly into the operation of the waiver clause.[3] Imports may be larger or smaller than in 1936–38; the current balance of payments may show a deficit of any size; but so long as exports, visible and invisible, are running at a rate of at least £866 million annually (as adjusted for price changes) Britain cannot claim the waiver privilege under Section 5.

The provision in paragraph (b) referring to the amount of £43,750,000 ($175,000,000) does not, it will be observed, constitute a "ceiling" on the amount of accumulated sterling balances which may be released annually. It does, however, have the effect of giving annual releases up to this sum parity with the payment of interest on the loan, because such releases may be deducted from current invisible credits in calculating the net-invisible-income component in the standard figure of £866,000,000.[4] No indication is given how this amount of $175,000,000 was derived. Nevertheless, under the definition of "current transactions" given in Article XIX(i) of the Monetary Fund Agreement, and adopted in the Anglo-American Agreement there would seem to be full justification for regarding payments up to this amount as current rather than capital outlays.[5]

II. *Relation of Loan to Other Obligations*

Section 6 defines the relation of the line of credit extended under the Agreement to other obligations of the United Kingdom.

Paragraph (ii) of Section 6 reads as follows: "The Government of the United Kingdom will not arrange any ***long-term*** loans from governments *within the British Commonwealth* after December 6, 1945, and *before the end of 1951* on terms more favorable to the lender than the terms of this line of credit." I have italicized parts of this provision to emphasize its severe

[2] Since the types of goods imported into Great Britain may change considerably over half a century, this basis of adjustment of the value of exports for the purpose in hand may become less and less satisfactory as time goes on.

[3] The balance of payments may affect the waiver privilege indirectly. For example, a large deficit for several years may reduce Britain's gold and dollar reserves to the point where paragraph (a) of Section 5 would come into play.

[4] Standing by itself, in fact, the provision in question would give releases of sterling balances up to $175,000,000 *priority* over the payment of interest on the loan, but such priority is eliminated by Section 6 (iii) of the Agreement. (See below.)

[5] Under that definition current payments include interest, and "payments of moderate amount for amortization of loans." Accumulated sterling balances now probably approximate $14 billion. If the fraction to be funded is to be, say ⅔ or even ½ of this sum, it will be seen that an annual payment of $175,000,000 against the resulting debt (including both interest and amortization) would be moderate indeed.

limitations. The wording of the clause leaves little doubt that it was intended to apply primarily to the Canadian loan to Britain then in contemplation. It will be seen that the clause would not affect loans to Britain by the International Bank.

The general intent of paragraph (iii) of Section 6 is to assure that the service of certain other British obligations will not have priority over the payment of interest on the loan. The first sentence of this paragraph reads as follows: "Waiver of interest will not be requested or allowed under section 5 in any year unless the aggregate of the releases or payments in that year of sterling balances accumulated to the credit of overseas governments, monetary authorities and banks (except in the case of colonial dependencies) before the effective date of this Agreement is reduced proportionately, and unless interest payments due in that year on loans referred to in (ii) above are waived." The inclusion of the word "aggregate" with reference to the release of sterling balances leaves the British government liberty to accord differential treatment to the holders of such balances. Moreover, it is noteworthy that private individuals, firms, and institutions other than banks (as well as colonial dependencies) holding pound balances are exempt, at the discretion of the British government, from the proportionate reduction in payments that is stipulated for "governments, monetary authorities and banks" in the event of a waiver of interest.

III. *Exchange Provisions*

General

The provisions relating to the convertibility and transfer of sterling into other currencies are contained principally in Sections 7 and 8.[6] Section 7 refers to the sterling area; paragraph (i) of Section 8 refers to the United States; and paragraph (ii) of 8 refers to all countries.

[6] The texts of these sections are as follows:

7. *Sterling area exchange arrangements.*

The Government of the United Kingdom will complete arrangements as early as practicable and in any case not later than one year after the effective date of this Agreement, unless in exceptional cases a later date is agreed upon after consultation, under which immediately after the completion of such arrangements the sterling receipts from current transactions of all sterling area countries (apart from any receipts arising out of military expenditure by the Government of the United Kingdom prior to December 31, 1948, to the extent to which they are treated by agreement with the countries concerned on the same basis as the balances accumulated during the war) will be freely available for current transactions in any currency area without discrimination; with the result that any discrimination arising from the so-called sterling area dollar pool will be entirely removed and that each member of the sterling area will have its current sterling and dollar receipts at its free disposition for current transactions anywhere.

8. *Other exchange arrangements.*

(i) The Government of the United Kingdom agrees that after the effective date of this Agreement it will not apply exchange controls in such a manner as to restrict (a) payments or transfers in respect of products of the United States permitted to be imported into the United Kingdom or other current transactions between the two countries or (b) the use of sterling balances to the credit of residents of the United States arising out of current transactions. Nothing in this paragraph (i) shall affect the provisions of Article VII of the Articles of Agreement of the International Monetary Fund when those Articles have come into force.

(ii) The Governments of the United States and the United Kingdom agree that not later

The British undertaking to apply no restrictions, after the ratification of the Agreement, on payments for permitted imports from the United States, or other current transactions between the two countries, represents essentially a continuation of previous British exchange control practices.

So far as third countries (in or out of the sterling area) are concerned, both Britain and the United States are obligated to lift all restrictions on payments and transfers for current transactions within one year after the effective date of the Agreement at the latest. This obligation refers to transactions taking place *after* the removal of the restrictions. The abrogation of the sterling-area dollar pool arrangement follows as a corollary to this obligation on the part of the United Kingdom.

It is to be emphasized that the exchange provisions of the Agreement relate only to *current* transactions. The contracting countries retain the right (as they do also under the International Monetary Fund) to place restrictions on the movement of capital funds. Moreover, there is nothing in the Agreement to outlaw the operation of exchange controls, which, of course, are indispensable if undesired capital movements are to be prevented.[7]

Finally, it is to be remembered that it is only the United Kingdom, and not the rest of the sterling area, which undertakes the convertibility and transfer obligations contained in the Agreement.[8]

Relation of Exchange Provisions to Bretton Woods Commitments

To understand the nature of the relationship between the exchange provisions of the Agreement and the commitments undertaken at Bretton Woods, it is desirable to recall briefly what the latter commitments are.

Countries which are members of the Fund undertake, as a general obligation, not to "impose restrictions on the making of payments and transfers for current international transactions" [Art. VIII, 2(a)]. There are, however, some exceptions to this general undertaking, of which the significant ones are:

(a) The transitional period: During a period of at least five years from the time the Fund begins operations member countries may, *even without*

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than one year after the effective date of this Agreement, unless in exceptional cases a later date is agreed upon after consultation, they will impose no restrictions on payments and transfers for current transactions. The obligations of this paragraph (ii) shall not apply:

(a) to balances of third countries and their nationals accumulated before this paragraph (ii) becomes effective; or

(b) to restrictions imposed in conformity with the Articles of Agreement of the International Monetary Fund, provided that the Governments of the United Kingdom and the United States will not continue to invoke the provisions of Article XIV, Section 2 of those Articles after this paragraph (ii) becomes effective, unless in exceptional cases after consultation they agree otherwise; or

(c) to restrictions imposed in connection with measures designed to uncover and dispose of assets of Germany and Japan.

(iii) This section and section 9, which are in anticipation of more comprehensive arrangements by multilateral agreement, shall operate until December 31, 1951.

[7] See "Exchange Control after Washington" by David Sachs, *The Banker* (London) January, 1946.

[8] The United Kingdom's obligation presumably extends, however, to some of the British colonial dependencies.

limitations. The wording of the clause leaves little doubt that it was intended to apply primarily to the Canadian loan to Britain then in contemplation. It will be seen that the clause would not affect loans to Britain by the International Bank.

The general intent of paragraph (iii) of Section 6 is to assure that the service of certain other British obligations will not have priority over the payment of interest on the loan. The first sentence of this paragraph reads as follows: "Waiver of interest will not be requested or allowed under section 5 in any year unless the aggregate of the releases or payments in that year of sterling balances accumulated to the credit of overseas governments, monetary authorities and banks (except in the case of colonial dependencies) before the effective date of this Agreement is reduced proportionately, and unless interest payments due in that year on loans referred to in (ii) above are waived." The inclusion of the word "aggregate" with reference to the release of sterling balances leaves the British government liberty to accord differential treatment to the holders of such balances. Moreover, it is noteworthy that private individuals, firms, and institutions other than banks (as well as colonial dependencies) holding pound balances are exempt, at the discretion of the British government, from the proportionate reduction in payments that is stipulated for "governments, monetary authorities and banks" in the event of a waiver of interest.

III. *Exchange Provisions*

General

The provisions relating to the convertibility and transfer of sterling into other currencies are contained principally in Sections 7 and 8.[6] Section 7 refers to the sterling area; paragraph (i) of Section 8 refers to the United States; and paragraph (ii) of 8 refers to all countries.

[6] The texts of these sections are as follows:

7. *Sterling area exchange arrangements.*

The Government of the United Kingdom will complete arrangements as early as practicable and in any case not later than one year after the effective date of this Agreement, unless in exceptional cases a later date is agreed upon after consultation, under which immediately after the completion of such arrangements the sterling receipts from current transactions of all sterling area countries (apart from any receipts arising out of military expenditure by the Government of the United Kingdom prior to December 31, 1948, to the extent to which they are treated by agreement with the countries concerned on the same basis as the balances accumulated during the war) will be freely available for current transactions in any currency area without discrimination; with the result that any discrimination arising from the so-called sterling area dollar pool will be entirely removed and that each member of the sterling area will have its current sterling and dollar receipts at its free disposition for current transactions anywhere.

8. *Other exchange arrangements.*

(i) The Government of the United Kingdom agrees that after the effective date of this Agreement it will not apply exchange controls in such a manner as to restrict (a) payments or transfers in respect of products of the United States permitted to be imported into the United Kingdom or other current transactions between the two countries or (b) the use of sterling balances to the credit of residents of the United States arising out of current transactions. Nothing in this paragraph (i) shall affect the provisions of Article VII of the Articles of Agreement of the International Monetary Fund when those Articles have come into force.

(ii) The Governments of the United States and the United Kingdom agree that not later

The British undertaking to apply no restrictions, after the ratification of the Agreement, on payments for permitted imports from the United States, or other current transactions between the two countries, represents essentially a continuation of previous British exchange control practices.

So far as third countries (in or out of the sterling area) are concerned, both Britain and the United States are obligated to lift all restrictions on payments and transfers for current transactions within one year after the effective date of the Agreement at the latest. This obligation refers to transactions taking place *after* the removal of the restrictions. The abrogation of the sterling-area dollar pool arrangement follows as a corollary to this obligation on the part of the United Kingdom.

It is to be emphasized that the exchange provisions of the Agreement relate only to *current* transactions. The contracting countries retain the right (as they do also under the International Monetary Fund) to place restrictions on the movement of capital funds. Moreover, there is nothing in the Agreement to outlaw the operation of exchange controls, which, of course, are indispensable if undesired capital movements are to be prevented.[7]

Finally, it is to be remembered that it is only the United Kingdom, and not the rest of the sterling area, which undertakes the convertibility and transfer obligations contained in the Agreement.[8]

Relation of Exchange Provisions to Bretton Woods Commitments

To understand the nature of the relationship between the exchange provisions of the Agreement and the commitments undertaken at Bretton Woods, it is desirable to recall briefly what the latter commitments are.

Countries which are members of the Fund undertake, as a general obligation, not to "impose restrictions on the making of payments and transfers for current international transactions" [Art. VIII, 2(a)]. There are, however, some exceptions to this general undertaking, of which the significant ones are:

(a) The transitional period: During a period of at least five years from the time the Fund begins operations member countries may, *even without*

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than one year after the effective date of this Agreement, unless in exceptional cases a later date is agreed upon after consultation, they will impose no restrictions on payments and transfers for current transactions. The obligations of this paragraph (ii) shall not apply:

(a) to balances of third countries and their nationals accumulated before this paragraph (ii) becomes effective; or

(b) to restrictions imposed in conformity with the Articles of Agreement of the International Monetary Fund, provided that the Governments of the United Kingdom and the United States will not continue to invoke the provisions of Article XIV, Section 2 of those Articles after this paragraph (ii) becomes effective, unless in exceptional cases after consultation they agree otherwise; or

(c) to restrictions imposed in connection with measures designed to uncover and dispose of assets of Germany and Japan.

(iii) This section and section 9, which are in anticipation of more comprehensive arrangements by multilateral agreement, shall operate until December 31, 1951.

[7] See "Exchange Control after Washington" by David Sachs, *The Banker* (London) January, 1946.

[8] The United Kingdom's obligation presumably extends, however, to some of the British colonial dependencies.

the consent of the Fund, "maintain . . . restrictions on payments and transfers for current international transactions." [Art. XIV (2)].[9]

(b) The "scarce currency" provision, which permits member countries "to impose limitations on the freedom of exchange operations" in currencies declared by the Fund to be scarce. (Art. VII).

(c) Restrictions imposed with the consent of the Fund.[10]

The Financial Agreement [subparagraph (b) of Section 8(ii)] provides that the general convertibility obligations undertaken in Section 8(ii) shall not apply to restrictions imposed in conformity with the Monetary Fund Agreement. However, it specifically prohibits the signatories from invoking the provisions of the "transitional" clause [Art. XIV(2)] of the Fund Agreement. Thus, the period during which Great Britain can *independently* maintain or impose restrictions on current payments is shortened from five years (or more), under the "transitional" clause of the Fund Agreement, to a maximum of one year under the Financial Agreement. It is clear, however, that Britain does not relinquish her right to impose restrictions on current transactions (either during the Fund transition period or later) under the scarce currency provisions of the Fund, or generally with the consent of the Fund.

Even payments or transfers to the United States prior to the coming into effect of the broader provisions of 8(ii) are specifically made subject to the scarce-currency provisions of the Fund.

The broad undertaking, contained in Section 8, not to impose restrictions on payments or transfers for current transactions will expire on December 31, 1951. It has been represented that this constitutes a serious loophole for British commitments under the Agreement.[11] But there is little ground for such a position. Great Britain, now a member of the International Monetary Fund, will presumably still be a member on December 31, 1951. Thus, on the expiration of the exchange provisions of Section 8, Britain will find herself subject to obligations under the Fund which, to all intents, are fully as exacting as those which she undertook in the Financial Agreement. In fact, the only difference of any importance between the two obligations relates to the "transitional period" of the Fund Agreement, the protection of which is expressly waived (after one year) in the Financial Agreement. The expiration date of Section 8 should just about coincide with the end of the five-year period which the Fund Agreement clearly contemplates as the reasonable maximum duration of the transition. It is true that, in order to allow for emergencies, the Fund Agreement has made it possible for the transition period to extend beyond five years. But a careful reading of Article XIV leaves no doubt that, barring emergencies or unexpectedly

[9] This right is qualified by the provision (in the same section) that "Members shall, however, have continuous regard in their foreign exchange policies to the purposes of the Fund; and, as soon as conditions permit, they shall take all possible measures to develop such commercial and financial arrangements with other members as will facilitate international payments and the maintenance of exchange stability."

[10] Article VIII, 2(a) states: " . . . no member shall, *without the approval of the Fund*, impose restrictions . . . ."

[11] Paragraph (iii) of Section 8. See statement by Senator La Follette, *Congressional Record*, Vol. 92, No. 79, April 30, 1946, p. 4320.

difficult conditions, five years will be the maximum period for which the Fund will tolerate exchange restrictions on current transactions on the part of its members.

There is thus very little likelihood that Britain will regain, on the expiration of Section 8 of the Financial Agreement, the right to re-impose restrictions on current exchange transactions. On the other hand, if international exchange conditions at that time are so disorganized that the Fund finds it necessary to extend the transition period indefinitely, it would be illusory to expect that Britain could for long continue to adhere to the free transfer obligations undertaken in the Financial Agreement. As to exceptions to the Fund's general rule of freedom of current exchange transactions, other than those relating to the transition period, we have already seen that the privilege of invoking these exceptions is not relinquished in the Financial Agreement. So long as the Fund exists, therefore, and so long as Great Britain remains a member of the Fund, the expiration of the convertibility provisions contained in Section 8 of the Financial Agreement will have little or no practical significance. This will not be true, of course, if the Fund Agreement should lapse or if Great Britain should find it necessary to withdraw from the Fund.

Relation of Exchange Provisions to British Monetary Agreements

What effect will the ratification of the Financial Agreement have on the network of monetary agreements which Britain has concluded since the end of the war with many European countries? These agreements are essentially bilateral arrangements whose most important feature is a reciprocal extension of credit in the form of a commitment to hold the currency of the other party, generally up to a stated limit.[12] Sterling balances accumulated under these agreements are not ordinarily convertible into other currencies but realizable only through the importation of sterling area goods and services. It is generally recognized, therefore, that the monetary agreements will have to undergo considerable revision if they are not to conflict with the provisions of the Financial Agreement which obligate Britain within one year to make all fresh sterling from current transactions freely convertible.

It is sometimes suggested, however, that despite the Financial Agreement, the monetary agreements should be continued substantially in their present form. This point of view was recently advanced by *The Economist* which, while conceding what it regards as a technical incompatibility between the two, argued as follows:

Britain under the loan agreement is obliged, within a year of ratification, to make all fresh accumulations of sterling (arising from current transactions) freely convertible. But for a further four years or more she might find that her export proceeds to other countries, equally adherents to Bretton Woods, could be spent only in those countries, or otherwise were blocked. In these circumstances, it would seem to be imperative that Britain should have the right both to ask her creditors if they will voluntarily agree to hold sterling, and to set a limit to the extent to which she

[12] See *inter alia* "British Financial Agreements with Western European Countries," *Federal Reserve Bank of New York Monthly Review*, Vol. 27, No. 8 (August, 1945), p. 59; and "United Kingdom Monetary Agreements," Department of State *Bulletin* (Jan. 20, 1946), p. 81.

herself is prepared to hold the currencies of her debtors. Otherwise, if the narrowest interpretation is put upon the Washington Agreement, the effect will be to undermine its basic objectives.

If, from zero hour when sterling is freed, Britain is in effect required to offer hard currency or gold for all her current payments without getting hard currency or gold for all her exports, she will have no alternative but to restrict her own imports drastically—despite the dollar loan . . . .[13]

It should be clear, however, that if *The Economist's* line of reasoning were followed to its logical conclusion very little would remain of the convertibility provisions of the Financial Agreement. It will be noted that *The Economist* speaks not only of the countries which are parties to the monetary agreements, but of Britain's "creditors" in general. But if every inconvertible-currency country which has a favorable balance of payments *vis-a-vis* Great Britain is to find that it can use its sterling balances only in the sterling area, what meaning can be assigned to the convertibility obligations undertaken in Sections 7 and 8? In the light of the bargaining power inherent in Britain's tremendous import surplus and the experience of Germany's pre-war creditors, one is bound to wonder, moreover, how voluntary in fact would be any "voluntary" agreement of Britain's creditors to hold sterling.

Finally, it may be worth pointing out that *The Economist's* entire argument for maintaining restrictions on the convertibility of certain sterling earnings is based on fallacious reasoning. This argument is contained in essence in the statement quoted above that, under the terms of the Financial Agreement, Great Britain would in effect be required to offer hard currency or gold for all her current payments without getting hard currency or gold for all of her exports. There is hidden in this argument the assumption that Britain's exports of goods and services go to one set of countries while her imports come from an entirely different set. But Britain's effective liability for hard currency or gold to any country will be equal only to her *net* imports of goods and services from that country; and, of course, it is Britain's aggregate anticipated net imports over the transition period that the American and Canadian loans are intended to cover.

Only in those cases where Great Britain has current-account surpluses with countries whose currencies are inconvertible will part of the proceeds of her exports be unavailable for meeting her import liabilities. But current surpluses are at least to some extent within the power of a country to control, especially under the conditions of a seller's market. Moreover, it is only fair to observe that Britain's obligation to convert under Sections 7 and 8 does not have to come into effect during the first year of the Agreement, when it is anticipated that Britain will experience her greatest difficulties with respect to her balance of payments.

IV. *Import Control Provisions*

Section 9 provides that if either signatory imposes or maintains quanti-

[13] "The Sterling Agreements," *The Economist*, Vol. CL, No. 5351 (March 16, 1946), pp. 421–22.

tative import restrictions (quotas, licenses, etc.) such restrictions will not discriminate against imports from the other signatory "in respect of any product." The Agreement thus recognizes by implication the right of either country to make use of quantitative trade controls to protect its balance of payments during the transition period. The obligation not to discriminate does not apply to preferential tariffs, nor is it generalized to other countries. It is reasonably clear that Section 9 was intended as a backstop to Section 8, and particularly 8(i)(a). In the absence of such a clause either signatory could nullify the purpose of Section 8, with respect to the trade of the other, by the simple device of substituting discriminatory import quotas for exchange restrictions.

In view of the foregoing, it is logical that Section 9 should expire at the same time as Section 8.[14] The "more comprehensive arrangements by multilateral agreement," which Section 9 is supposed to anticipate refer of, course, to the contemplated International Trade Organization.

There are three exceptions to the rule of nondiscriminatory quotas. Discrimination is permitted:

(a) where it is necessary in order to work off accumulations of inconvertible currencies acquired up to December 31, 1946. It appears that this clause would apply *inter alia* to currencies acquired by Great Britain under her monetary agreements with European countries. The term "inconvertible currency" is not defined. There would probably be general agreement, however, that it means any currency which is generally not readily convertible into the "hard" currencies.

(b) where it is necessary "to assist . . . a country whose economy has been disrupted by war."

(c) where the discriminatory quantitative restrictions have an effect equivalent to any exchange restrictions which either government is authorized to impose in conformity with the scarce-currency provisions of the Fund Agreement.

Possibly the rationale of clause (c) is that if either country must discriminate against the trade of the other, it is preferable that such discrimination be implemented through quotas rather than through exchange controls since quotas do not give rise to blocked balances, while exchange restrictions may, and frequently do.

V. *Accumulated Sterling Balances*

The provisions relating to the settlement of the sterling debts which Great Britain incurred during and since the war are contained in Section 10 of the Agreement.[15]

Two major obligations are undertaken by Great Britain in this section. The first provides for a three-way settlement of the sterling balances held by sterling area countries: one part to be paid in convertible exchange, one

[14] See Section 8 (iii) of Agreement.

[15] The text of Section 10 is as follows:

10. *Accumulated sterling balances.*

(i) The Government of the United Kingdom intends to make agreements with the countries concerned, varying according to the circumstances of each case, for an early settlement covering the sterling balances accumulated by sterling area and other countries prior to such

part to be funded, and the remainder to be written off.[16] While the language on this point is apparently unequivocal, it will be observed that the clause in question does not indicate even approximately what ratio each of these three parts is to bear to the whole. Neither does this section specify a definite time limit within which the sterling balance agreements are to be concluded, though "early" settlements are clearly contemplated. This lack of specificity is explained, of course, by the fact that the settlements involve third countries whose agreement to any particular type of arrangement cannot be presumed.

The reason for inserting the obligation contained in 10(i), in spite of its necessary indefiniteness, is to be sought in the broad objectives underlying the Agreement, one of the foremost of which is to help establish "a world trading and monetary system . . . within which the trade of all countries can be conducted on a multilateral nondiscriminatory basis."[17] It was recognized that the existence of huge inconvertible balances, especially in the currency of one of the two greatest trading nations, is not compatible with the kind of multilateral, nondiscriminatory world which the Agreement is supposed to help establish. Britain therefore undertakes, in as precise terms as the circumstances permit, to eliminate such balances.

The second obligation contained in this section is, like the first, motivated by a desire to promote multilateralism and nondiscrimination in international trade. It provides that, as sterling balances are released, whether in lump sums or in installments, they are (after the first year of the Agreement) to become freely convertible. Thus the funds involved will be expendable in any country. This obligation applies not only to "released" balances (*i.e.*, balances released as a result of the settlements contemplated in Section 10, paragraph [i]), but also to balances "otherwise available for current payments." This latter category would include sterling balances accumulated by non-sterling area countries under the British monetary

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settlement (together with any future receipts arising out of military expenditure by the Government of the United Kingdom to the extent to which they are treated on the same basis by agreement with the countries concerned). The settlements with the sterling area countries will be on the basis of dividing these accumulated balances into three categories: (a) balances to be released at once and convertible into any currency for current transactions, (b) balances to be similarly released by installments over a period of years beginning in 1951, and (c) balances to be adjusted as a contribution to the settlement of war and postwar indebtedness and in recognition of the benefits which the countries concerned might be expected to gain from such a settlement. The Government of the United Kingdom will make every endeavor to secure the early completion of these arrangements.

(ii) In consideration of the fact that an important purpose of the present line of credit is to promote the development of multilateral trade and facilitate its early resumption on a nondiscriminatory basis, the Government of the United Kingdom agrees that any sterling balances released or otherwise available for current payments will, not later than one year after the effective date of this Agreement unless in special cases a later date is agreed upon after consultation, be freely available for current transactions in any currency area without discrimination.

[16] This clause is confined to the sterling area countries which, however, own the great bulk of the accumulated sterling balances.

[17] See "Statement by President Truman and Prime Minister Atlee," made at the time of the publication of the Agreement, *State Department Publication 2439*, December 6, 1945, p. 1.

agreements discussed above, which at present are expendable only in the sterling area.[18]

ALEX ROSENSON*

* The author is assistant chief in the Division of Financial Affairs, Department of State. The views expressed are his own and do not necessarily reflect the position of the State Department. Helpful comments by George Luthringer and Sidney Merlin are gratefully acknowledged.

Notes on the Productivity Conference

More than 200 participants and observers from labor organizations, management, government, universities and private research organizations attended the Conference on Productivity held in Washington, October 28 and 29, 1946. The Conference, jointly sponsored by the Bureau of Labor Statistics of the Department of Labor and the Division of Statistical Standards of the Bureau of the Budget, was planned for technical discussion of problems of concepts and measures.

Topics discussed in the five sessions of the Conference included concepts and measures of productivity at the job, plant, company, industry, national and international levels; scope and limitations of existing productivity measures; needs for additional measures; and methods of presentation of measures. Chairmanship of the sessions was alternated between Leon Henderson, Research Institute of America; Robert Nathan, Robert Nathan Associates; George W. Taylor, University of Pennsylvania; Isador Lubin, American Statistical Association; and Thomas Blaisdell, Department of State. Arrangements were in charge of an Executive Committee, with membership drawn from labor, management and Government.

Hiram Davis of the Wharton School, in discussing general problems of concepts and measurements, was the first of several speakers to advocate the use of several output-input ratios for the measurement of productivity, rather than the use of the output-labor input ratio exclusively. Measures of at least all other important input factors should be similarly developed, as units of raw material, electric energy, and investment. Although productivity, if considered as "productive efficiency," might ideally be measured in terms of total output in relation to total input, the translation of diverse input factors into a common measure is sufficiently unsatisfactory as to lead Dr. Davis to favor a series of ratios relating output to each important input item.

The measurement of output over a period of time encounters problems of change in the quality and character of products. Should value or price, man-hours used, or potential service be used as weights in preparing the output measure? It was suggested that "value added" weights may be appropriate, although these may introduce new distortions through inclusion of profits. Manufacturing cost weights may prove more desirable. Man-hour weights, perhaps appropriate in some plant and industry measures,

[18] Under the British wartime exchange control regulations, sterling balances arising from current transactions with the United States have been placed in so-called "American accounts" which have been freely transferable into dollars. Section 8 (i) (b) of the Agreement confirms this arrangement, thus safeguarding against a possible (but unlikely) change in British policy whereby these balances might have been blocked.

cannot be applied to industries for productivity measurement at the national level.

Frank Garfield of the Federal Reserve Board presented the view that man-hour weights are not sufficiently comprehensive to secure a balanced view of production being measured. Production in industries with high product value in relation to man-hours worked, as chemicals and petroleum, is minimized when combined with industries of low product value per man-hour, as textiles and apparel. Arguing that electric power consumption—another input item—would not be considered a proper method of weighting, he questioned if man-hours were not in the same category. He concluded that "value added" weights were the more appropriate as being more comprehensive and as expressing the combined judgment of the community as to what constitutes production in the sense of contributing to the scale of living.

Use of the term "labor productivity" to describe the output-labor input ratio met with frequent criticism. The term is misunderstood to imply a changing labor contribution to production or labor effort. Several suggestions were made to reverse the ratio and present it as "labor requirements per unit of output." This was considered to have a further advantage of inviting attention to alternative "requirements per unit of output" measures such as raw materials, power, and invested capital.

Representatives of the labor organizations expressed interest in a non-statistical approach to supplement quantitative information. Not only is there interest in statistical measures to compare the present with the past, but a description of changes in the productive process which result in the present level of productivity is needed to understand the remarkable increase this country has experienced. This point is interesting in connection with discussion of international comparisons which brought out the interest of foreign countries in American productivity experience which might be of assistance in rehabilitation.

Martin Gainsbrugh of the National Industrial Conference Board summarized parts of a survey made by the Conference Board on management opinion of present productivity levels. In spite of general awareness of the importance of productivity, he concluded that plants generally had no measures of labor productivity. Where measures are found, methods are extremely variable both with respect to the production factors and the labor input factors. It was suggested by other participants that management frequently developed various measures of comparing productivity at a given plant over a period of time based for the most part upon experience and not appropriate for interplant comparisons. Such ratios include car loadings in relation to employment, tonnage produced in relation to man-hours worked, etc.

Charles E. Young of Westinghouse, speaking from the management viewpoint on measures at the company level, expressed his opinion that many productivity measures are essential, but each has the common purpose of measuring actual or prospective monetary results in relation to monetary outlay. The measurement of productivity in physical terms represents an effort to eliminate the vagaries of money from the measure. Unit labor cost, that is, output divided by payroll, is generally more suitable in arriving at

business decisions, and has the advantage of giving consideration to differences in labor hours as reflected in differences in wage rates. Productivity increases, he believes, generally occur in the production of specific products or in particular processes. Should such an increase then be attributed to an entire plant or industry as would be the case in usual productivity measures?

In discussing measures at the national level, Everett Hagen of the National Planning Association enumerated three types of problems which must be resolved before satisfactory measures may be constructed. They included type of weights to be used in combining industry data, the selection of the most representative base period for continuing series, and the measurement of productivity in the nonphysical output, or service, type of industry. Production economies which cannot be caught in particular industry measures, such as the effect of an integration within an industry which leads to no change in physical production or labor time but might result in higher profits or lower prices for the product or service, are included in national measures.

Julius Hirsch, commenting on German experience in increasing industrial productivity, considered cartelization and the adoption of uniform cost accounting systems throughout an industry largely responsible. Ready comparison between plants within an industry permitted the establishment of high performance and utilization standards to which actual performance could readily be compared.

Present Bureau of Labor Statistics labor productivity indexes have serious shortcomings which might be avoided by a statement describing their limitations and the preparation of supplemental descriptive information, according to Katherine Ellickson of the CIO. A major defect of the indexes is in the output components and arises from the changes in product specifications during the war period even in so-called civilian industries. For example, are shoes produced to military specifications to be given the same importance in the production index as civilian type shoes? The man-hours worked indexes represent man-hours paid for rather than strictly hours worked, and include paid vacations and holidays. The employment and payrolls data upon which man-hours indexes are based have a downward bias which is only partially corrected in current BLS procedures. Another problem arises from BLS methodology in securing production data from one source and employment from another. The inevitable result is inclusion of man-hours relating to all production within a plant, although some part of the production may well be of products other than that which is being measured. The extent to which such other production varies from that in the base period or has labor requirements at variance with the production being measured determines the nature of the resultant error.

Duane Evans, speaking for BLS, indicated the measures could not be considered exact. Constructed for the most part from data collected for other purposes, they are necessarily rough, although considered indicative of broad trends. BLS has attempted to evaluate to the extent possible its indexes in the light of expressed criticisms and believes them reasonably accurate. It is not believed the indexes are sufficiently exact to be used, except very generally, for collective bargaining purposes. It was suggested

that if labor and management could agree as to methods and measures to be employed in a given industry for collective bargaining, BLS then might be able to construct useful tools for this purpose.

One of the interesting overtones at the Conference was the use of productivity measures in collective bargaining. Labor unions are groping for satisfactory measures to enable them to claim a share in productivity increases, after being rebuffed by the limitations of existing measures. Research in varying concepts and measures might well be repaid many times if it could result in decreasing labor-management friction. Present measures are largely based on the National Research Project which emphasized the labor displacement facet of the problem. In these more optimistic times, interest is directed, in the words of Solomon Barkin of the Textile Workers Union, more to "productivity in the sense of the creation of new wealth ... for distribution."

It may be considered surprising that agreement on principles was as considerable as was the case in view of the widely divergent interests represented. As summarized by Samuel H. Thompson of the Department of Commerce, there were three main areas of general agreement. These included (1) the general agreement of all interests that increased productivity is necessary leads to the necessity of providing techniques whereby productivity may be measured; (2) there is the need for many different methods of measurement, including different types of input-output ratios, to analyze adequately the factors that make for production; and (3) ultimate responsibility for the improvement in productivity cannot be assigned generally to any single productive factor.

A digest of the proceedings is being prepared by the Bureau of Labor Statistics and will be available to interested parties. The Executive Committee announced at the final session that continuing work would be planned, although the Committee was not then prepared to announce its character.

THOMAS J. MILLS*

* The author served on the Executive Committee of the Productivity Conference as a representative of the Bureau of the Budget.

Official Criticism of Soviet Economics Institute

A recent article in *Izvestiya*[1] makes public severe criticism of the Soviet Union's Institute of Economics by the Presidium of the Academy of Sciences of the U.S.S.R.

The Institute, recognized as the leading Soviet center for economic research, particularly that centering on the domestic economy, is condemned for not having become a center of economic thought and for not properly meeting the problems before it. It is accused of permitting errors to appear in its publications and of focusing too much attention on historical subjects to the detriment of work on current problems of Soviet economics. The Presidium also charges that the Institute does not publish significant theoretical works which indicate the "advantages" and "consistency" of the

[1] *Izvestiya*, October 25, 1946, p. 2.

socialist economic system over capitalism, nor does the Institute properly "expose and criticize the anti-Marxist bourgeois school in the area of economic science."

To rectify these deficiencies, the Presidium recommended that the Institute improve its scientific work and prepare significant studies of socialist construction, as well as issue effective criticisms of "anti-Marxist bourgeois economic theories." In order that the Institute's personnel may be strengthened, it is recommended that the director, Professor P. A. Khromov, add new qualified scholars to the staff, exercise stringent control over institute research, and establish more severe standards for postgraduate students and doctoral candidates.

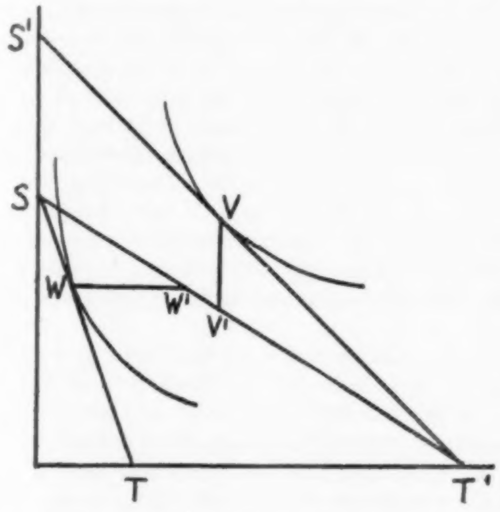
Harry Schwartz*

* The author is assistant professor of economics at the Maxwell Graduate School of Syracuse University.

Geometrical Comparison of Elasticities

Mr. John S. Henderson has suggested a method of comparing the relative elasticities of points on different demand curves.[1] A simpler method is as follows:

To compare the elasticities at W and V, join S and T' the alternate extremities of the tangents to the demand curves at W and V, draw WW'



horizontally to meet ST' at W', and draw VV' vertically to meet ST' at V'. The elasticity at W, WT/WS, equals $W'T'/W'S$, and the elasticity at V, VT'/VS', equals $V'T'/V'S$ (by similar triangles). These projections permit direct quantitative comparison of the elasticities in terms of the familiar length ratios.

Abba P. Lerner*

* The author is a member of the graduate faculty of the New School for Social Research.

[1] *American Economic Review*, Vol. XXXVI, No. 4, Pt. 1 (Sept., 1946), pp. 662–63.

MEMORIAL

Gaëtan Pirou

Pirou's most important rôle was that of a teacher. He opened the horizons of the young by bringing the results of foreign thought to French universities. I well remember how in his seminar in the École Pratique des Hautes Études at the Sorbonne, Pirou introduced an eager group of young graduates to Menger, Clark, and Mitchell. It was in this seminar that Marx was seriously discussed and in the same seminar we heard the first rumblings about Keynes on *General Theory* through visitors from across the Channel.

The versatility of Pirou can be judged from the fact that he wrote on such different topics as Sorel and syndicalism on one hand and Walras and marginal analysis on the other hand. He was much interested in the history of economic thought and he wrote an excellent volume called "L'utilité marginale de C. Menger a J. B. Clark." In a small book on "La monnaie française de 1936 à 1938" he revealed much of the results of his analysis of monetary conditions in Indo-China, a subject which he had studied on behalf of the French government.

Pirou probably considered his general works on theory and method the most important ones but the trend of the times toward the mathematical approach in economic theory left his efforts in general theory somewhat behind the pace of modern analysis. In his approach to general economics Pirou distinguished very carefully, almost pedantically, between descriptive economics, theoretical economics, and economic doctrine. In spite of his tendency to separate, to classify and to catalogue, his outlook was far from narrow. The book "Introduction à l'Étude de l'Économie Politique" bears evidence of Pirou's erudition in the social sciences at large. As a social scientist he followed in the footsteps of Simiand, helping to bridge the gap between the economists of the Faculté de Droit and those of the Faculté des Lettres.

Politically, he was a middle-of-the-roader. Once he wrote a political volume, *Glanes*, under the pseudonym of "Jean B." with a "preface by G. Pirou." He was too much a believer in what he thought was "objectivity" in economic analysis to become the advocate of a potent political doctrine. Pirou was eclectic, it is true, but as an eclectic he was great. His views reached beyond the boundaries of scholarly discipline as well as beyond the boundaries of nations.

Professor Gaëtan Pirou was born in 1886 and died in 1945. For sometime he was Chef de Cabinet to the Président of the Senate (1927–1930). For the greater part of his career he was a professor at the University of Paris. He was also editor of the "Revue d'Économie Politique" and of a series of volumes on economic studies in general and on the history of economic thought, particularly in foreign countries.

The following is a selected list of the writings of Gaëtan Pirou:

Les doctrines economique (Paris, 1925); *Georges Sorel 1847–1922* (Paris, 1927); *Doctrines sociales et science économique* (Paris, 1929); *Introduction à l'étude de l'économie politique* (Paris, 1929); *L'utilité marginale* (Paris, 1932); *Les théories de l'équilibre économique L. Walras et V. Pareto* (Paris, 1934 and 1938); *Le corporatisme; corporatisme et libéralisme; corporatisme et étatisme; corporatisme et syndicalisme* (Paris, 1935); *Les nouveaux courants de la théorie économique aux États-Unis* (Paris, 1935 and 1939); *La monnaie française depuis la guerre, 1914–1936* (Paris, 1936); *La monnaie française de 1936–1938* (Paris, 1938); *L'utilité marginale de C. Menger a J. B. Clark* (Paris, 1938); *Traité d'économie politique* (Paris, 1942).

HENRY S. BLOCH

Lake Success, N.Y.

BOOK REVIEWS

Economic Theory; General Works

Fundamentals of Social Science. By FRANCIS E. MERRILL and others. (New York: Appleton-Century. 1946. Pp. xvii, 660. $3.75.)

This book was designed as a text for a one-semester introductory course in the social sciences at Dartmouth. The sociological material with which the book opens consists of an extended and lucid discussion of social organization and the family, population and race problems, and of crime and the criminal. This is followed by an interesting section on business and government, and then by a rather more conventional treatment of price and credit institutions, public finance, and labor and economic insecurity. The concluding part is devoted to government and politics in a democracy. The context of all of this is the contemporary United States.

A book of this sort, which purports to introduce beginning students to three social sciences within a single semester, is confronted with an especially acute problem of selection. A successful solution is dependent not only upon the choice of meaningful and significant elements from each discipline, but upon such a selection that coherence and unity is imparted to the book as a whole. For why should combined treatment be given to economics, sociology and government rather than to any other combination of fields, unless it is that the social sciences, taken together, reinforce and illuminate each other? The sections on politics, and on business and government, bring this out well. The intricate interplay of industrial concentration, political pressures, social control of business, political assistance to business, and the institutional framework within which both business and government must operate, is portrayed with a fullness which neither economics nor sociology nor government could possibly achieve in isolation. And, partly for this reason, these sections of the book make interesting reading.

Unfortunately, these sections are unique in that respect. Peep-holes are cut through interdepartmental fences here and there, through which we are allowed to glimpse the adaptation of the family, for example, to modern economic institutions, or the operation of social forces upon government. But, in general, the book consists of selections of sociological, economic and political material assembled between the same covers. And sometimes even the selection seems somewhat peculiar. It is hard, for example, to see why three chapters should be given to public finance, while the business cycle, whose shadow appears again and again throughout the entire book, is not even mentioned in the index.

Still worse, at least in the reviewer's judgment, is the standard textbook

dreariness of the treatment, except in the sections already mentioned. The book is admirably objective and it is descriptively accurate; but it is dull. Like almost every book designed as a text, it comprises a vast amount of generally well-organized material carefully watered down to the presumed absorptive capacity of an average group of students who take social science the way they take spinach: because it is supposed to be good for them. To make the dose more digestible, if not more palatable, everything "difficult" has been excised, and everything controversial eschewed.

The authors deserve commendation for their venture at increasing students' understanding by cutting across departmental lines as far as they have. It is to be hoped that in the next revision they will seek to enhance students' interest by giving them something to try their teeth upon and to argue about.

George P. Adams, Jr.

Cornell University

Geschichte der Volkswirtschaftslehre. By Edgar Salin. (Bern: Francke. 1944. Pp. 224. S. frs. 9.50.)

This is the third, revised edition of a book that was first published in 1923. The book is concerned with the history of economic ideas from the classical antiquity to the present. However, it consists mostly of comments on various schools of thought and groups of ideas rather than of comprehensive exposition and discussion. It would be impossible to "learn" from this book the essential content of the main doctrines with which a student should get acquainted. The author has a lively interest in the problem of the appropriate balance between the historical and the rational orientation in economic thought. He stresses that theories are significant only if they possess historical as well as logical validity. This is a point that cannot be overemphasized.

References to the literature are inserted after each chapter.

William Fellner

University of California, Berkeley

National Economies

Inter-American Affairs—1945. Edited by Arthur P. Whitaker. (New York: Columbia Univ. Press. 1946. Pp. 328. $3.75.)

This is the fifth annual review of the affairs of our Latin American and Canadian neighbors. Nine authors contribute sections on diplomacy, Canada, political thought, labor and social welfare, cultural relations, issues in economic relations, and the year's leading economic developments. A good deal of excellent statistical data is also presented in the appendices. All in all, the volume contains a mass of information on, and interpretations of, Pan-American events during a historic year.

The editor's survey of Pan-American politics and diplomacy ably treats a subject which is becoming increasingly important in the face of the ever-

larger rôle being played by Latin America in world affairs. He puts the cards on the table and does not hesitate to call a spade a spade. The result is a fine discussion of the behavior, motives and aims of the American states. Particularly candid, and relevant, are the editor's remarks about the Argentine régime and the strategy and tactics of the United States in Latin American affairs. Of comparable quality is Paul Redwood's brief treatment of Canadian developments during the year, and William Ebenstein's discussion of Latin American political and social thought. Two chapters on labor and social welfare and on cultural relations round out the non-economic sections of the volume.

In the economic sections, Miron Burgin discusses the year's outstanding commercial, agricultural and industrial developments. Charles Carson covers the banking and financial developments of the period. Useful reference material is to be found in these pages.

Economists will probably find Sanford Mosk's chapter on "Issues in Inter-American Economic Relations" to be the most interesting part of the volume. The reviewer, however, found it more provoking than enlightening. Dr. Mosk's principal thesis is that Latin America is excessively dependent upon exports. There is nothing particularly novel about this view—it has been stressed for some time by the Latin Americans themselves and, in recent years, has been warmly espoused by a few North American writers. What is worthy of note, however, is Mosk's particular development of the thesis.

The argument runs about as follows: In Latin America fluctuations in the value of exports beget fluctuations in national income and employment in the same way that changes in the level of investment affect income and employment in advanced industrialized nations. But Latin America also suffers from the fact that her exports fluctuate in response to external forces—the changing import demands of industrial countries—whereas changes in the level of investment in "mature" countries are traceable mainly to domestic factors. In short, a large decline in Latin American exports reduces income payments in export industries, and contractive tendencies spread throughout the economy. So far, so good. But the "monetary repercussions" must also be considered. An increase of exports "causes at once a corresponding increase in the domestic money supply," and because of fractional reserve requirements there results a multiple expansion of money in periods of increasing exports and a multiple contraction when exports decline (p. 102). We shall see that statements of this sort are unwarranted generalizations from a peculiar wartime situation.

The reader will observe that Mosk is here concerned with matters dealt with under the heading of the foreign-trade multiplier. Yet there is no reference to such familiar things as leakages. In effect, Mosk implicitly assumes zero leakages—for how else could he write that an increase of exports "causes at once a corresponding increase in the money supply," with such increase in turn giving way to a multiple expansion of deposits under the operation of the banking system? Yet the leakages are, in fact, sizable and

conspicuous features in Latin America. For the marginal propensity to import is very high in such countries. Writers who allege that the world suffers from a chronic shortage of dollars even assert that in relatively undeveloped areas the value of this propensity is greater than unity. In any case, Mosk paints a greatly distorted picture of the monetary repercussions of changes in the value of exports, and much of his discussion suffers in consequence. Nor does some of his history (p. 103) bear him out in this connection: Latin American monetary experience of the 1920's and early 1930's did not reflect favorable export developments so much as favorable capital movements. It just happened that capital imports were greatest during periods of (1) high exports, and (2) exchange appreciation and an expected early return to a gold-standard basis.

The export sector of Latin American economies Mosk calls "modern," in contrast to the "subsistence" sector which lies largely outside the commercial framework. Unemployment is never very large in the other American republics because people shift out of the subsistence sector in years of good exports and back into it in periods of low exports. The standard of living, however, is extremely low in the subsistence sector. Agricultural productivity, which must be raised in this area, can only be improved by levying burdens on the "surplus"-producing export sector. It is argued that improved conditions in the nonexport sector will eventually benefit the general business-community, including the export industries. The argument is plausible as far as it goes; but Mosk does not consider what happens when the nonexport sector is expanded industrially under a program of diversification based on heavy protection. Logic and experience tell us that the country's relative export position is likely to deteriorate considerably, especially if, as is typical in Latin America, the national economy is not well balanced in terms of basic resources. What the proponents of diversification fail to see is that if the program is carried to the lengths proposed by many, it is bound to involve a considerable decline in export (and over-all) efficiency. The advocates of such a program would do well to bear in mind an old, but ever relevant, truth: that our own phenomenal development in the nineteenth century was a result mainly of the unparalleled richness of our natural resources, not of a protective system.

Of decidedly better quality is Dr. Mosk's brief discussion of the economic issues at the Chapultepec Conference of 1945. The freer trade proposals of the United States delegation are contrasted, proposal by proposal, with the agreements finally reached by the Conference. In each case, the United States proposals were watered down by protectionist amendments insisted upon by the Latin American states. The discussion is another good example of how some conferences wind up by paying lip service to professed ideals.

Students of inter-American affairs will find the present volume a very useful source of information on important developments during this transition year.

VIRGIL SALERA

Miami University

Economic Systems; Post-War Planning

The Socialist Tradition, Moses to Lenin. By ALEXANDER GRAY. (New York: Longmans, Green. 1946. Pp. x, 523. $7.50.)

This book, which "does not . . . aim at being a history of socialist thought," would be easier to review if it stated just what it does "aim at being." Avowed histories have sought brevity with simplicity by emphasizing systems of thought. They have discussed ideas with little reference to conditions thought about. Nor is it an innovation in historical writing to suggest a line of argument by selection, arrangement and wording. My decision is to treat the book as a highly readable, provocative short history. After having been steeped together in the author's mind for a long time, the parts may have a consistency of which he himself is not fully conscious.

The problem of defining socialism is left to the final chapter. Socialists are easier to pick. Nobody is here excluded who has sought a better world by subversion rather than by reform. This scheme opens a wide range of choices among left-wing thinkers and thoughts. The opposition seems to consist of reformers. There is no tendency to look over their shoulders for less reasonable people in the rearward echelons. Socialist arguments are often quoted or stated fairly in fragments but persistently interrupted by rebuttal.

Such an account has biographical aspects—it makes a difference what a few chosen representatives and their experiences were like. A bias against Marx and Marxism is acknowledged in the preface. With a frank dislike goes a seriousness of treatment which might be preferred by other socialists to what they get. "Despite, or because of, their absurdities," the author is "more at home" with Saint-Simon and Fourier. Sympathy with their social philosophies does not seem to explain this. Saint-Simon's writings turn out to be a "jungle" of "contradictions and incoherences." Fourier's "outrageous nonsense" marks him as "a chaos" and at times "a hilarious farce." The general effect of Proudhon's writings is "asphyxiating." Godwin is "always logically foolish," only his premises being wrong. These tidbits are mere samples from a mine and a storehouse of satirical prose.

Aristotle argues against Plato that man is by nature unadapted to a society of friends with all things in common, families included. Socialist coloring in the New Testament is traced back largely to the pious Essenes, who had common possessions and practically ignored the family problem. Luke is singled out as the left-wing gospel writer. His reference to communal property in the Acts is explained as "but an old man's confused dream of something he has persuaded himself ought to have happened." He is among the witnesses against himself as to the facts. Certain Christian Fathers further clear up any mistaken view that the early Church favored communism. It is easy to misinterpret the cohesion and internal charity of religious communities, and Professor Gray thinks the record has been wishfully sampled in this case.

The real Christian tradition is found to have been summarized and com-

pleted by St. Thomas Aquinas in defending wealth but regarding it as "a trust held for the public good"—an obligation left to the owner's conscience. This moral trusteeship seems almost too familiar. The reader is firmly reminded that the economic problem, modern style, could not have mattered to an Angelic Doctor exclusively concerned with the Kingdom of Heaven as an end. Hence "alternative ends" would not have been acceptable, and "the application of scarce means" to them appears in his writings only as "mangled fragments" of a problem (pp. 54–55).

This unconvincing argument becomes interesting when the reader asks himself what it is meant to suggest in connection with the socialist tradition. St. Thomas was admittedly concerned with "the public good" and with relationships conducive to it in the earthly province of the Kingdom of God. The "alternative ends" stressed in the current economic calculus are not final ends. If the "social point of view" is taken, they become only means to "the public good." It is anybody's conjecture, and immaterial, whether St. Thomas would have been interested in a mechanics of means devised centuries after his death.

The relevant point may be that this "functional" economist thought of means only in terms of objectives, pushing his reasoning as far as possible toward final ends. In this respect, the socialist tradition seems closer than its "classical" opponents to the Thomistic point of view. A broadly sociological outlook is possible without considering sociology a branch of theology. The Webbs come to mind. They are barely mentioned in the book, and not in this connection. References to Continental socialists outside France and Russia are surprisingly casual and sparse. Fabianism gets twice as much space as Revisionism, Guild Socialism four times as much. Belgian and Dutch socialists are absent, and the Internationals do not appear in the index. It may be suggested that British society has been sensitive to certain French ideas and characteristically allergic to Marxism.

Godwin is justly made a key figure in the lineage of both socialism and anarchism. In between him and the Marxians, stress is laid upon Saint-Simon, Fourier and Proudhon. Godwin's hostility to marriage repeats a note sounded early in the book. Saint-Simon is represented as a sort of technocrat, posthumously converted to socialism by his followers. The author professes a weakness for Fourier which seems hardly consistent with the ridicule heaped upon him. This is so extensive and thorough that the brief acknowledgment of Fourier's influence seems incongruous. No mention is made of some rather distinguished associationists in this country.

Obviously Proudhon is important for the split between socialists and anarchists on the procedure for getting rid of the state. His monetary ideas are noted as a feature of his mutual or freely contractual scheme of social organization. The federalism designed as a larger voluntary organization of humanity was taken over by Bakunin. Syndicalist doctrine owed much to Proudhon, and Professor Gray concedes him the main theoretical foundations of Guild Socialism. This tempestuous agrarian and crusader against usury was often less drunk than he seemed on Hegelian contradictions. The humor occasioned by this feature should not obscure the fact that the man

had intellectual relatives all the way from Moses to Keynes. Which reminds me that this book has little to say about contributions of the socialist tradition to non-socialist thought and practice.

Remarks scattered through scores of pages prepare the reader to find the details of "scientific socialism" unoriginal with Marx. In a discussion of Louis Blanc and the "iron law of wages" as refuted by unionism (p. 222), we get a glimpse of Marx in "the fetid air of the British Museum, reading round about 1860 the Blue Books of 1810," and "at least a generation, if not two, behind the times in which he lived." English Pre-Marxians expound surplus value and the increasing degradation of the working classes while Marx was at the marble-playing age. The specific characterization of Marx (pp. 297–298) is unfriendly. He appears as a suspicious, quarrelsome, self-assertive person, contemptuous of all who failed to acknowledge his superiority, full of envy, bitterness and hatred, and empty of tolerance or love for the world at large. Engels, the window of the team upon the world of realities, seems more normal.

The criticism of Marxism is perhaps the most substantial part of the book, as well as the most serious in tone. Leninism is represented as Marxism with certain features emphasized and developed. The two sections are separated by 125 pages, including a chapter on Syndicalism which keeps the class struggle going as a theme.

Like many others, the author is baffled by a system of thought which attaches special meanings to ordinary terms and shifts obscurely back and forth between the concrete and the abstract. He charges into Marxian redoubts only to find them empty save for a few intended followers of Marx who seem equally bewildered as to whether the master has been there or ever intended to come. We have all had the same trouble with the words "capital" and "capitalist" in reference to surplus value. The meaning of "history" in the Marxian language does not seem to bother the author, though he notes that a philosophy of history is basic to the distinction between "scientific" and other socialism. He pretends to imagine that Hegelian dialectic, a mystery left to insiders, must have more in it than he can see or than Marx and Engels extracted, as illustrated by some quotations. This is good fun, but it might be more useful to face the question, discussed somewhere by Meyerson, whether this type of dialectic has any place in scientific explanation as conceived nowadays. Another issue is whether turning Hegel upside down helps. Interpreting ends through means is often defensible in detail and on empirical grounds, but a philosophy of society so based—perhaps the author is right in leaving it to the illuminati.

The chapter entitled "Lenin" is really about theoretical Leninism, with little reference to Soviet practices which in many cases clarify the tradition—often changing it as well, of course. A short review need mention only the question of proletarian dictatorship. Lenin seems to have believed shortly after the Revolution that the transition to a classless, stateless and therefore free society might be short. Experience cured Soviet leaders of the old Marxian assumption that management had become largely a matter of routine bookkeeping, and was readily convertible. Hence with Stalin the

transition became an entire historical era. Old habits and traditions must be made over during a vaguely envisaged period which might be extremely long. Meanwhile there is the issue of whether the proletariat dictates or is merely the instrument of dictators.

A final chapter on definitions and general considerations helps to balance and sweeten a book which contains much satire, some of it on the margin of lampooning. The author proves quite capable of ridiculing inter-war British governments when they happen to be the subject matter. He is acutely conscious of the place of European expansion in the rise of easy-going liberalism and *laissez-faire*, and of the problem of increasing public controls in a western Europe which has found expansion increasingly tough. If the process goes into reverse for a long period, western Europe may find it very difficult to preserve values of individualism which nobody questions. H. G. Wells, who held different social views, once defended himself for leaning over backward to maintain a balance which he felt to be threatened.

This book is much easier to read than to review. I have a feeling that my remarks have stressed my misgivings, leaving its very considerable and quite timely merits in the shade. It is a joy to pick up so lucid and literate a work on an economic subject. The refusal to discuss social sciences as though they were branches of mechanics is much too rare, in my opinion, and should not be discouraged.

M. M. Knight

University of California, Berkeley

Les Problèmes Théoriques et Pratiques de la Planification. By Charles Bettelheim. (Paris: Presses Univ. de France. 1946. Pp. 350. 240 fr.)

So far almost all studies dealing with socialist economics have been either theoretical analyses of the mechanisms of a hypothetical socialist state (as exemplified by Lange's *Economic Theory of Socialism*) or factual descriptions of the Soviet economy (such as for instance the book of Calvin Hoover). Mr. Bettelheim, howeve:, has intended to follow another course and to present a synthesis, using experience in planning practices as a test of the validity of theory and using this latter to better interpret and appraise practical planning policies. This is not the first attempt in that direction. But while in a previous case the approach was a marginalist one, Mr. Bettelheim relies heavily upon the labor-value theory, although he has made an endeavor to take into account some of the contributions of marginalist analysis.

The result might have been better if the author had adopted a topical arrangement instead of organizing his book in such a way that we have, on one hand, a study of planning practices (mainly but not exclusively in the U.S.S.R.) and, on the other, a theory of planning.

Part I, *Planning Practices*, is an apt analysis of the machinery and working of the Soviet economy to the beginning of the war. It describes and explains the basic institutions: ownership, planning agencies, "markets," etc. It shows how plans are established and executed. A particularly valuable chapter is the one dealing with price planning. Finally, it offers a balance

sheet of the results of the first and second Five-Year Plans, both in terms of absolute achievements and in terms of ratios of fulfilment of the programs.

Although this reviewer may find it flattering that one of his books has supplied so much material, including figures, quotations and suggestions, he would have preferred to find more up-to-date and more first-hand information. Also, perhaps because he has been spoiled by the American habit of tabulations, he would have enjoyed some tables and charts. But it is fully recognized that, working in a country deprived of foreign contacts for six years, Mr. Bettelheim was heavily handicapped.

Two chapters of Part I are devoted to flexible planning (*planification souple*), namely, government control without government ownership, which the author considers as unsound. If such a conclusion were warranted—and fortunately it is not—it would destroy many hopes.

Part II, *Planning Theory*, starts with a correct presentation of the fundamental economic problem, namely that a socialist system should have a machinery providing rational economic calculations, in order to attain an economic optimum. But the author dismisses lightly the literature of the 'thirties on the economic theory of socialism, although he mentions Dickinson, Dobb, Durbin, Hall, Heimann, Landauer, Lange, Lerner, *et al.*, in his bibliography. Taking for granted the Mises argument, he maintains that if rational calculations in a socialist state appear impossible, it is because of the use of the subjective marginalist analysis. The right conclusion is, argues Bettelheim, that marginalist subjective analysis is not satisfactory and he sets out to prove that a socialist economy can work rationally only on the basis of a labor-value theory.

He would have labor time as a basic yardstick to be used throughout the system in order to determine all values, including the monetary unit. But he feels it necessary to include in the "production costs," in addition to the value of labor, various allowances which are substitutes for the remuneration of capital and natural resources. Then he recognizes that retail price should be such as to clear the market, without surplus unsold inventories and without a surplus of unsatisfied demand (at this price). He is therefore prepared to have prices based on demand; this price would represent the "extrinsic" value of goods, as opposed to the "intrinsic" value which is based on labor.

In order to attain an optimum allocation of resources, Bettelheim says, planners should, in the long run, for every product, seek the quantitative output which equalizes extrinsic value and intrinsic value. He, thus, comes close to the now prevailing view that the optimum output, for a given product, is the one which equalizes marginal utility and marginal cost, except that (a) he sticks to average cost, (b) he means by cost labor only, and (c) he denies that cost is ultimately a sacrificed utility.

Failing to devise a mechanism for the valuation of productive resources, Mr. Bettelheim's system becomes entirely indeterminate, except for the arbitrary decisions of the planners.

For instance, the average hourly wage is to be computed as a percentage of the value produced by an hour of work. Assuming that this value is

known (it is the yardstick), the percentage will be determined by the percentage ratio of total producers' wages to the aggregate value of consumers' goods available. Indeed, the total consumers' income must be equal to the aggregate value of consumers' goods available: but since there are non-producers' incomes, these latter must be deducted in order to find the total share of producers. This is tantamount to saying that the producers will have whatever is left over. The planners are free to determine any aggregate output of consumers' goods and to allocate any part to non-producers. The wage rate will be an *a posteriori* apportionment.

When the need for investments is taken into account, the aggregate *price* of consumers' goods is adjusted, so that it includes their value plus the value of investments (which can be neither financed by saving, nor sold); thus, the aggregate price of goods for sale remains equal to consumers' income (except for discrepancies due to market pricing). Of course, planners can invest at their pleasure: they only have to add an average "profit" rate to the "intrinsic" value of goods produced.

If we are going to live in Bettelheim's world, the prospects are not very encouraging. The author does not recognize the need for a free labor market: apparently, workers will receive assignments as required by the plan. Wages will be determined by the administration at a level below the value of the work performed. Consumers' goods will be sold above their value and there is very little evidence that consumers will have a say in the choice of goods to be produced and in the amount to be invested.

Moreover, because the author does not see the meaning of the law of comparative costs and does not analyze correctly the mechanism of international trade, he thinks that a nationally planned economy should aim at a more or less complete self-sufficiency, in order to be protected against disturbances coming from an unstable world economy. A more searching analysis would show that it is possible for a planned economy to develop its international trade, probably better than a free economy.

Overburdened by a number of old-fashioned ideas, he is obliged to resort to a complicated analysis which may give the false impression of something very deep and scholarly. And although it should be clear to every trained economist that he is basically wrong, it may require half a dozen articles to prove it convincingly.

ROBERT MOSSÉ

Lake Success, N. Y.

Marxism and the Democratic Tradition. By A. LANDY. (New York: International Publishers. 1946. Pp. 220. $2.50.)

Programs of economic and social reform have often been criticized on the grounds of their alleged incompatibility with democracy. Intransigent liberals of the *laissez-faire* type whose hands-off policy in times of economic distress and whose opposition to unionism and collective bargaining could be carried out only by dictatorial means, seldom tire of pointing to what they consider to be undemocratic features of all proposals based upon the principle of purposive planning in economic affairs. Socialism and particu-

larly Marxism have come in for a good measure of criticism because of what appears to the critics as a contradiction between the Marxist program and the democratic tradition of the eighteenth and nineteenth centuries. Such specific tenets and proposals of Marxism as the abolition of private property, the revolutionary implications inherent in such abolition, the concept of the class struggle and the idea of the dictatorship of the proletariat appear to be fundamentally in opposition to the democratic tradition—an impression which for the Western world seems to be steadily reinforced by the example of Soviet communism. It is the merit of Landy's study that it submits this challenge to Marxism to a serious historical examination. The analysis proceeds on a broad front outlining as it does the political and economic history of the last 500 years and devoting almost two chapters to an interesting survey of Marx's intellectual development. The historical treatment, although admittedly introductory, nevertheless breaks new ground and prepares the way for a deeper and more fundamental study of the true relationship between socialism and democracy.

Briefly, Landy's conclusions are as follows: "The contradiction that appears to exist between Marxism and the democratic tradition is actually the contradiction historically inherent in the democratic current itself" (p. 160). The democratic revolution against feudalism was more than merely the class struggle of the ascending middle classes against aristocratic privilege and absolute rule; it was at the same time a struggle of the masses to realize the promise of the welfare and liberty of the common man. Long before the triumph of the burgeoisie the struggle for democracy was begun by the people themselves in a series of peasant and plebeian revolts of the farm and urban poor. These unsuccessful movements, the memory of which endured down through the triumphant revolutions in England, America and France, represent part of the democratic tradition—a tradition which was preëminently "a people's tradition." The persistency of this tradition is indicated by the aspirations of the Levellers and Diggers who raised the social question during the Puritan Revolution and Babeuf's conspiracy of the Equals which advanced outright communist ideas during the French Revolution. (Landy would have found an aspect of this tradition even in the American Revolution.)

The urban masses of artisans and common laborers as well as the small farmers gave social and economic content to the democratic principle that all power is derived from the people. Consequently, the struggle for the emancipation from feudalism involved the bourgeoisie from the very outset in a struggle against the fourth estate. While proclaiming the abolition of feudal privileges, the middle classes in England, France and America proceeded to restrict liberty to political liberty narrowly circumscribed by property qualifications, and equality to formal equality before the law. This conflict between the middle classes and the broader democratic aspirations of the common man which took the form of Jeffersonian and Jacksonian democracy in America, of Chartism in England and utopian socialism in France has embarrassed and plagued bourgeois reality ever since.

What is then the relationship of Marxism to the democratic tradition?

According to Landy, Marxism represents the historical continuation of the democratic efforts which were begun by the early and unsuccessful peasant and plebeian revolts against feudalism carried on by the Levellers and Diggers, and found expression in the struggle for universal suffrage and the programs of social and economic reform during the early 19th century. More than this, as the scientific and most advanced expression of the working class movement, Marxism has actually deepened and enriched the democratic tradition by freeing the humanism and universalism of the Enlightenment from its bourgeois limitations. In fact, the only true and most consistent democrats are the working people who, to quote Marx, are the only class which "cannot emancipate itself without emancipating all the other spheres of society."

Before Landy arrives at these conclusions he gives an interesting and brief summary of certain aspects of the democratic movement in Germany which is followed by the account of Marx's intellectual development already mentioned. To this reviewer the most significant results of this account are first, the amazing and yet not surprising manner in which Marx's intellectual development was conditioned by the frustrations of a progressive intellectual who gradually realizes the general backwardness of German society and experiences the failures of the democratic movement in Europe during the nineteenth century; secondly, the fact that political and social developments in America (prior to the Civil War) seemed to have played hardly any rôle in Marx's political consciousness. The revolutionary implications of Jeffersonian and Jacksonian democracy seem to have escaped Marx and the continental socialists. In this as in other respects he shares the intellectual self-sufficiency of the average European during the nineteenth century who paid but little attention to what was happening on the continent across the Atlantic.

The limitations of Landy's study lie not in what the author says but in what he leaves unsaid. For example, nothing is said about what appears to this reviewer as the central issue of the relationship of communism and the democratic tradition, namely what will be the rôle of the individual under centralized economic planning and how far may the revolutionary emancipation from bourgeois political democracy open the road for a new form of "serfdom" if it does not maintain at least the constitutional safeguards for the opposition which is one of the achievements of nineteenth century democracy. Of course, questions such as these do not, and perhaps cannot arise within the self-sufficient conceptual framework of the author. It is, however, precisely this narrow self-sufficiency which either has lost contact with the topics of contemporary discussions or prefers to ignore them, which more than any other single factor, robs the orthodox Marxist of many opportunities to challenge orthodox and reactionary political and economic theory. Marx's great intellectual influence was due to the fact that he had assimilated fully to his own reasoning what he preferred to call, and what doubtless was, "bourgeois ideology." Contemporary Marxist thought seems to have lost contact with the changing "ideological superstructure" of our times and thus tends to neglect the fact that it is never safe to combat

new ideas merely by ignoring them. All this is said not as a critique of Landy's historical demonstration of the democratic roots of Marxism but rather as a suggestion to Mr. Landy to explore, perhaps in a second study, the scope of individualism and of democratic political rights under socialist planning.

K. WILLIAM KAPP

Wesleyan University

Time for Planning: a Social-Economic Theory and Program for the Twentieth Century. By LEWIS L. LORWIN. (New York and London: Harper. 1945. $3.00.)

Although one might not think so from reading the publishers' lists, publishers always say that they do not like to publish symposia. Different writers, writing on almost the same topic, are too prone to anticipate or repeat each other. Sometimes this is more than compensated by the emergence of interesting differences and even exciting conflicts. But this compensation is denied when all the essays are written by the same man, saying roughly the same thing to different people on different occasions.

Time for Planning is a collection of essays and articles written by Mr. Lorwin at various times between 1932 and 1944. They are all articles in favor of planning, explaining some of the meanings of planning and pointing out the nature of the problems that planners encounter and the reasons for supposing that none of these problems is insoluble. The book has the rather magniloquent subtitle "A Social-Economic Theory and Program for the Twentieth Century" and the most often repeated theme is that planning is the key to the twentieth century while *laissez faire* was the principle of the nineteenth century. The book begins with a prologue "The Twentieth Century—The Plan Age" and is divided into parts dealing in turn with Varieties of Planning, Planning and the Democratic State, Planning in the United States, Labor and Planning, and Planning for World Reconstruction; and it ends with an essay called "The Outlook for the Twentieth Century." But not many readers will feel that this has made the symposium into a book. They will feel that it is a collection of pieces, each of which is in the part where it is to be found only because it would have been more difficult to fit it into one of the other parts, and they will try to overcome some of the boredom by indulging in the unrewarding game of trying to guess the date of each piece before looking it up in the preface.

It is perhaps unnecessary to say at this point that the reviewer was annoyed and depressed by the book rather than enlightened and stimulated—and this in spite of, or perhaps rather because of, a very close sympathy with the social objectives and economic proposals sponsored by Mr. Lorwin.

One of the causes of the annoyance is an apparent looseness in the meaning of planning. It seems to reach all the way from complete central organization of everything to the mere recognition of governmental responsibility for some sort of policy other than merely keeping the peace. In this sense planning is surely not what distinguishes the twentieth century from

all other centuries and hardly deserves the title of a Theory and a Program. But in this as in other matters the book is not fair to Mr. Lorwin. In many places the author distinguishes between different kinds and degrees of planning. But because the essays were directed at different audiences and were written at different times, the classifications are heterogeneous and cut across each other, giving the impression of looseness. Thus distinctions are made between operational and institutional planning (p. 14); between physical, economic, social and cultural planning (p. 20); between absolute socialist planning, and partial state socialist planning, voluntary business planning, and social progressive planning (pp. 34–39); and again between strategic or selective planning and directive-institutional planning (pp. 60–61). Mr. Lorwin favors social-progressive planning and probably would also like it to be directive-institutional, but the latter is not too clear. He does not like absolute socialist planning or even partial state socialist planning. But while one sometimes gets the impression that it is because of their closeness to totalitarianism, in other places (which means at different dates) other considerations are uppermost, such as the political impracticability of complete equalitarianism or the identification of *partial* state socialist planning with Russia (which seems rather strange even for 1932).

Mr. Lorwin is not quite free from the myths, which so often go with social progressives, of supposing that economists (*i.e.*, bourgeois economists) when they speak of "the Invisible Hand" are demonstrating their faith in a transcendental divine intervention, or of supposing that full employment is impossible in a capitalist society because capitalists try to maximize their profits. He almost seems to believe that underconsumption and depression are the inexorable punishment for the moral crime of trying to maximize profit. More important still, he fails to understand the proper function that market prices can perform in guiding distribution and production where they are not perverted by monopolistic influences, claiming it as one of the benefits of planning that "instead of market price economic planning tends to use the concept and mechanism of social price" which is "fixed not on the basis of the relation between supply and effective demand but on the basis of costs plus whatever surplus may be needed to carry out the larger social purpose" (p. 31).

The basic weakness in economic theory which this displays detracts considerably from the effectiveness of an otherwise excellent criticism of those who try to identify planning with totalitarianism. The result is that the best part of the book is that which deals with the relatively less important subject of labor and planning—a field in which rigid economic analysis is not so necessary.

Probably the most depressing part of the book is the section of the peroration where Mr. Lorwin is tempted to fit the grand notion of twentieth century planning against nineteenth century *laissez faire* into a correspondingly imposing philosophical setting. Against nineteenth century determinism is put the vulgar misunderstanding of physical indeterminism which was popular recently among mystics who thought this could vindicate their hostility to scientific impatience with superstition. Mr. Lorwin here floats

away on "creative energism" and "social energetic relativism" as if these extravagances were necessary to support the common sense notion that we may hope to be able to do something about our problems. For this is the real and perfectly sound lesson that Mr. Lorwin is eager to teach in combatting the obverse and almost perished mediaeval superstition that, all our troubles being "natural," their correction is impossible and even the attempt impious.

Yet the book contains many interesting and useful essays, displays an extremely intelligent approach to the more important of our economic problems, and is pervaded with a deep devotion to the free and democratic way of life. It is excellent for showing what is on the mind of progressive people whose enthusiasm for planning, even if somewhat extreme and undiscriminating, has not interfered with their devotion to freedom—for whom planning is still a means for serving free people and has not been perverted into an end to which freedom might have to be sacrificed. In the sections dealing with labor and democracy in relation to planning there are many essays which prove that the parts can be better than the whole. Even the final chapter on the outlook of the twentieth century, if we disregard the philosophical adornment which attempts to give a grand framework to the book, can be read with profit as an interesting and intelligent, if rather optimistic, account of, and possible solutions for, the chief problems which faced us before the atom bomb.

ABBA P. LERNER

New York, N.Y.

Business Cycles and Fluctuations

Full Production without War. By HAROLD LOEB. (Princeton: Princeton Univ. Press. 1946. Pp. xviii, 284. $3.50.)

The war has shown what an enormous amount of goods and services this country can produce when everyone willing and able to work is employed. Why don't we achieve a similar result in peacetime? What policies should be pursued to achieve this aim? These questions form the subject matter of Mr. Loeb's book.

Mr. Loeb starts from a situation where an existing balance between supply and demand (at full employment?) is disturbed by an introduction of a cost-saving (labor-saving?) device. If the displaced workers are to be re-employed, some combination of the following cases must take place: (1) a fall in prices; (2) a rise in wage rates; (3) an injection of new money.

The author takes great pain to demonstrate that monopolistic rather than price competition is typical of our economy. If so, cost-saving devices will not lead to price reductions sufficient to re-employ the displaced labor. This excludes case (1). The results of case (2) are not much better. We are told that even though wages have risen considerably over the last fifty years or so, their rise has been quite irregular and not clearly related to changes in productivity. Therefore a rise in wages cannot be relied upon as an instru-

ment for re-employment of labor. We are thus left with case (3), the injection of new money.

At this juncture the reader feels like interrupting the author to ask a few questions. First of all, why did he state the problem in this form; or more precisely, why does the whole disturbance begin by the introduction of a cost-saving device? Is it because the author simply wants to consider *one* of the several problems of full employment, or is it because he regards such a disturbance as *the* problem? The book gives an impression that the latter interpretation is the correct one. Suppose, however, that the cost-saving device was not introduced. Would the original balance between demand and supply be automatically preserved? What about the public's desire to save and thus possibly withhold income from circulation, a fact the author seems to be perfectly aware of? Should the question he is considering be therefore superimposed on the more general problem of the availability of investment outlets?

The second question would refer to the price level. After all, the presence of monopolistic competition does not mean that a cost-saving device leads to no price reduction at all; as a matter of fact, the maintenance of a reasonably stable price level (with rising wages), which the author is evidently aiming at, is impossible unless industries benefited from rapid technological progress do reduce their prices. On the other hand, couldn't the author simply say that in an economy with difficult employment problems and also saddled with a large public debt, a falling *general* price level is undesirable in the first place, and let it go at that?

If a reasonably constant (or at least not falling) price level is assumed, it immediately follows that in order to produce and dispose of the larger real output made possible by the introduction of the cost-saving device, an increase in money income must take place. And further, if income velocity of money is assumed (as Mr. Loeb evidently does) to be constant as well, an injection of new money becomes necessary. And this money is needed irrespective of what happens to wages. If wages go up, the money is needed to pay them; if they don't, it must be created for other purposes, such as capital formation mentioned by the author. All this is a matter of simple arithmetic; it is difficult to understand why the author had to devote practically half of the book belaboring it.

Another point that makes the reader uneasy is Mr. Loeb's treatment of cumulative movements. If new money is not injected, the cost-saving device throws some men out of work. This is supposed to reduce the buying power and presently " . . . a downsurge in production would be touched off" (pp. 68 and 119). "A cumulative upsurge in production . . . " (p. 124) begins about as easily. We are all aware that our economic system is not particularly stable; but better demonstration is needed to convince us that it is in fact a powder keg.

The book has quite a number of similar statements which, while not being very essential to the argument, should be either supported by better proof, or left out altogether. Thus on pages 74–75 we are told that while the profit of one firm is indeterminate, total profit is, so that "One producer, in prac-

tice increases his profit at the expense of another producer." Further on (p. 148) it is stated that if new money is injected by way of capital formation, only the primary expenditure raises wages; the secondary and other expenditures (the multiplier process?) go only into profit, interest and rent. And so on.

Let us return, however, to Mr. Loeb's main argument. We left it at the point where it was shown that if the men replaced by the cost-saving device are to be re-employed, an injection of new money must take place; in a private enterprise economy, this injection usually proceeds *via* capital formation. Moreover, since producers are able to pocket the reduction in cost (new money allowing them to dispose of the products at old prices), their profits rise. This rise has two effects: on the one hand, it diverts a larger proportion of income to the upper income groups and therefore increases total savings; on the other, profit prospects become brighter and lead to greater investment (capital formation).

Many an economist who has worried about finding investment outlets to offset savings will now be puzzled. If *both* saving and investment rise, and perhaps at the same rate (Mr. Loeb not saying anything to the contrary), where is the problem? According to Mr. Loeb, the problem arises because increased investment leads to an over-accumulation of capital. As the percentage of income saved rises over the cycle, the ratio of investment to consumption goes up as well. Hence the ratio of capital to consumption also rises, and presently exceeds that required by existing technique of production. This involves waste; also unused capital darkens profit prospects and eventually results in a downswing.

Mr. Loeb's logic contains errors; his statistics are not convincing, but he does face up to an important and difficult problem which is omitted from most discussions. Indeed, one of the very few questions on which the vast majority of American economists seem to agree is the desirability of encouraging private investment. So many plans to that effect have been devised lately. Mr. Loeb is more concerned about *discouraging* private investment. He joins here the company of Marx and his followers,[1] J. A. Hobson,[2] Michael Kalecki[3] and others, who are seriously worried about over-accumulation of capital.

It is impossible to analyze this notion here.[4] The answer depends to a very great extent on the rate of growth of income which the economy manages to achieve, a factor to which Mr. Loeb pays scant attention. It may well be true that if private enterprise absorbs the full amount that the

[1] I am particularly referring to Paul M. Sweezy's underconsumption theory in his *The Theory of Capitalist Development* (New York, 1942), pp. 180–89.

[2] See, for instance, his *Economics of Unemployment* (London, 1922), and *Rationalization and Unemployment* (New York, 1930).

[3] See his "Full Employment by Stimulating Private Investment?", *Oxford Economic Papers*, No. 7 (March, 1945), pp. 83–92; also his essay "Three Ways to Full Employment," in the *Economics of Full Employment* (Oxford, 1944), pp. 39–58.

[4] The reader is referred to my paper "Capital Expansion, Rate of Growth and Employment," *Econometrica*, Vol. XIV (April, 1946), pp. 137–47 and "Expansion and Employment," published in this issue of the *Review*, pp. 34–35.

community desires to save, an excessive accumulation of capital will develop very shortly. The burden of the proof lies on the proponents of this idea. The mere fact that business failed to absorb such savings in the past does not necessarily mean that, had it absorbed them, an over-accumulation of capital would have resulted.

So much for Mr. Loeb's theoretical structure. His practical program is developed along several lines. First of all, savings must be absorbed, and to avoid excessive accumulation of capital, a good part of them should be invested by the government in public works. The latter are evidently not regarded as capital. Still, public works should not be undertaken unless they are useful. To avoid social waste, saving should be reduced in the first place. This Mr. Loeb expects to achieve by means of income taxes, which by the way dampen profit prospects and therefore discourage excessive investment. Should such a program result in too large tax yields, the author would partly replace taxation by advancing the minimum wage rate. The transfer of income from capitalists to workers will also dampen profit prospects and reduce the propensity to save.

This program is presented not as a fixed pattern, but rather as a set of measures to be applied when needed. Thus in a depression, tax rates should be lowered, rather than raised, to stimulate private investment. As the latter picks up and an excessive accumulation of capital is likely to develop, income taxes and the minimum wage rates should be raised. And all this time, an adequate program of public works is undertaken as well.

This is the essence of Mr. Loeb's program. It is regrettable that he devoted too much space to fairly obvious theoretical questions and therefore had to present his practical suggestions in a rather brief and even superficial manner. Like in the first half of the book, we again find a number of confusing statements. Thus on page 239, Mr. Loeb tries to keep national income down because a larger income (160 billion dollars) would require more steel than can be produced with existing capacity. But why not increase this capacity? Here is an excellent opportunity for private investment which need not result in excessive accumulation of capital, and which can give us a larger national income. Why not utilize it? The reader may also feel disturbed with the author's lightheartedness in describing the practical effects of his program. At best, the practical application of fiscal policy is an extremely difficult task, in which we have not succeeded so well lately. Not much is gained by trying to skip over its difficulties.

With all these limitations, Mr. Loeb deserves full credit for striking boldly at an important and difficult problem confronting our society. Such an attempt calls for more praise than the elegant and precise solutions of small and insignificant questions which we find so often in economics.

EVSEY D. DOMAR

Carnegie Institute of Technology

The Individual and the Postwar Period. By ARCH W. SHAW. (Scarsdale: Updegraff Press. 1946. Pp. 24. 50c.)

We have in Mr. Shaw's brochure a brief survey of three post-war periods

from the first part of the 19th century to the present time.[1] Stemming from this survey, which compares and draws a similarity of pattern among the three periods, is his development of the reasons for this similarity based on an analysis of men's individual and group behavior, their emotions and feelings. Thus we have displayed for our appraisal a psychological theory of the business cycle.

Mr. Shaw's position is essentially this: A boom results from men's overconfidence in themselves and in the future. Their overoptimism is a primary result of the apparent success with which, in the course of each Juglar, the industrial system passes through "minor" (36 to 44 months) cycles without "serious economic derangement." This observation constitutes, so far as I know, a new and rather interesting formulation of the reasons for the accumulation of overconfidence toward the peak of a "major" cycle. "Each time business emerged from the shallow depths of one of these minor cycles," writes Mr. Shaw, "men built up increasing optimism." Thus, to the author, the "emotional seeds" of a major cycle seem contained and deviously concealed within the minor cycles that compose it.

Furthermore, these emotions are accentuated, and follow more persistently similar patterns, in periods after wars. Although Mr. Shaw focuses attention "on the sequence of human thought-processes through a postwar period," it would be simple to apply his analysis to cyclical patterns not post-war in character. For the moment, however, the argument should be judged only as it relates to post-war periods. Mr. Shaw's general conclusion, after warning that men "move in herds" and observing that they are led by a few influential persons—some understanding, some ignorant and selfish—to rashly impulsive actions, is that we must "read the signs" to avoid the "wastes and dislocations of recurring booms" and the catastrophe of depressions. Finally, and I suspect this admonition of Mr. Shaw's to be one of the main reasons for his essay, we are told that if the existing type of economic system is to be maintained, we must curb the emotional excesses which cause the cycle.

Mr. Shaw does not analyze deeply; he is fundamentally descriptive. Of course, in the study of cycles, description is a valid and necessary technique. But although we are given a portrayal of the emotional forces alleged to cause economic fluctuations and a few statistics on post-war periods, we do not find comparative *causal* analyses for the periods treated, other than psychological factors which are not proved to be originating or primary influences. The author writes that "the automatic corrective factors, which operated in minor cycles, were not strong enough readily to restore balance, and ultimately a depression resulted." But we are never told what the automatic corrective factors are.

With the exception of the point on the source of accumulating overoptimism, Mr. Shaw's argument is neither new nor original. Some might feel that the discussion is revealing and helpful to the general public. But Mr.

[1] The first was after the Napoleonic Wars; the second, those years after the Crimean War, the American Civil War and the German aggression in western Europe; the third, after World War I.

Shaw's overemphasis on psychological reconversion as a corrective policy (he urges that we should "avoid elation in prosperity and undue depression in adversity") and his disparaging observations regarding the possible rôle of government in undertaking fundamentally corrective economic measures, make his remarks misleading and, if accepted blindly, perhaps dangerous.

Donor Lion

University of Buffalo

Public Finance; Fiscal Policy; Taxation

L'Ordre Social. By Jacques Rueff. (Paris: Librairie du Recueil Sirey. Two volumes. Pp. 748. 570 fr.)

Professor Rueff's book is a most difficult one to review. It is a passionate and violent plea against monetary manipulations and direct controls, probably written during the war, by a man who saw these powerful weapons used by the occupant as a systematic and scientific method of looting and exploitation of his country. Indeed, in many ways, the two heavy tomes of Mr. Rueff are a political pamphlet, clothed in the terminology and methodological apparatus of pure economics.

The first five parts of *L'Ordre Social* present a dynamic theory of monetary phenomena, which constitutes a sequel to the static theory of money, published by Mr. Rueff in 1927. The sixth part studies the functioning of human societies under liberal and under authoritarian (or socialist) regimes, and the thwarting of property rights by rationing, price control and inflation. Finally, the seventh part, entitled "Demand Financial Soundness, or Accept Slavery," concludes the book with a political prescription and a summary: "It is through the deficit that men lose their freedom."

The central theme of the two volumes is the distinction, reminiscent of Paretian terminology, between "true" and "false" rights, or rather titles.[1] A false title is one which cannot be truly implemented upon maturity because the assets of the debtor are inferior to his liabilities. A false title should normally affect only the private relations between the creditor and the debtor. It assumes, however, general social significance when it is made eligible to rediscount. The Central Bank then monetizes a false asset, the money issued against it cannot be resorbed by the sale of the asset, prices increase and money becomes "false" money, spoliating its holders through depreciation in terms of goods.

The majority of false titles find their origin in budgetary deficits, and their monetization by the bank of issue. The resulting spoliation is neither avoided nor remedied, but only changed in its incidence by such methods as the suspension of the currency's convertibility, price and exchange controls, rationing, etc. "Rationing . . . is merely an indirect method of spoliation, intended to reduce the standard of living of the population in the exact

[1] Indeed, the whole method of exposition is strongly akin to that of the *Cours*, with that curious mixture of subjective value judgments and pure economic analysis in which Professor Schumpeter would see another example of the "Ricardian sin."

measure necessary to free the real wealth which the state wants to appropriate. But it is a hypocritical and occult method. Without decreasing in any way the sacrifice resulting from any given governmental intervention, it makes it possible to throw the blame on the insufficiency of production, or the hardships of the times, and thus to break the direct link between cause and effect. In the arsenal of financial lies, it is most subtle and the most deceptive" (p. 702). Rationing and planification, moreover, are tantamount to slavery, as proved by the French experience between 1940 and 1944. "Everything, the choice of his [the Frenchman's] foods as well as of his activity, the selection of his newspapers or books, of his movies or lectures, of his sympathies or hatreds, everything was dictated to him by the commanding powers, unless, renouncing in advance all human dignity, he had sold it his soul wholesale by collaborating in its enterprise. In a regime of total planification, there is no free man. Every man, like the ox in the stable, receives his ration and must perform the task which the plan assigns him. Thus, if it wishes to avoid disorder, the deficitary Government must impose slavery. . . . Social disorder or slavery, such is the only choice offered to people who live in financial disequilibrium" (pp. 714–715).

In spite of the heavy theorizing of the book, Mr. Rueff's purpose is practical rather than theoretical. The book thus concludes with a specific prescription for freedom, summarized in four "recipes of political art":

1. To teach men economic theory;

2. To make each Minister liable, before the Court of Accounts, for any deficit resulting from his acts;

3. To create a college of "thesmothetes," appointed for life by the highest moral authorities of the country, "fed, like their Athenian precursors, at the State's expenses," and endowed with a right of absolute veto with respect to any Parliamentary decision capable of engendering false titles, except when it has been solemnly established and declared that public salvation is at stake;

4. To establish, along with a Supreme Court of Justice, an International Court of Accounts which would pass on national budgets and would be, subsidiarily, through the powers of inquiry and inspection which it should have, the only efficacious guarantee of a policy of disarmament. The national "thesmothetes" should be designated—modifying (3) above—by the supreme international authority of which they would be the representatives.

The above summary is necessarily too brief to permit a fair presentation of the economic analysis offered in support of Mr. Rueff's views and which fills a good part of his two volumes. One point may be singled out as representative of the type of reasoning underlying many of his arguments. It is claimed, for example, that if the Vichy Treasury had financed through taxation the daily indemnity of 500 million francs exacted by Germany, the need for rationing would have been correspondingly reduced, and the attendant "disorders, scandals," etc. . . . could have been avoided. This assumes that there is a one-to-one correspondence between taxation and the reduction of expenditures by the taxpayers. It seems far more likely that part of the taxation, especially if assessed as suggested in accordance with

each citizen's contributive capacity, would have come out of savings, and that a full offset to the inflationary impact of the German exactions would have required a far larger increase in the fiscal burden. Thus, not only budgetary equilibrium, but substantial surpluses, would have been necessary to avoid the creation of "false titles" through price increases or rationing.

Other parts of the study reflect the same rigid and conventional approach toward fiscal and monetary mechanisms. This is not to say that nothing is to be learned from Mr. Rueff's two volumes. On the contrary, they point out forcefully a number of important considerations which are often dealt with very lightly, or not at all, in current American literature on the subject. They have to be isolated, however, from a mass of old preconceptions and circumstantial pleading which reflect the inevitable chasm in economic and political thinking created by intellectual isolation and different experience in wartime between the United States and occupied Europe.

ROBERT TRIFFIN

Washington, D.C.

Management of the Federal Debt. By CHARLES C. ABBOTT. (New York: McGraw-Hill. 1946. Pp. v, 187. $2.50.)

This small volume collects in revised form, together with some new material, several papers on debt management problems previously published by the author in academic and financial journals. In outline, it is a plea for reorientation of thought about the public debt—away from theory which makes the debt a subordinate instrument of "full employment" policy to a narrower fiscal theory of which debt management is itself the essence. The size of the debt necessitates such a change of emphasis. To "reduce the spread of opinion" between economists and persons in the financial world, Professor Abbott has fortified his persuasion with a nonstatistical discussion of ownership, types and characteristics of federal issues, without writing an economics of public credit. The discussion is developed within the framework of that fiscal "orthodoxy" which establishes good public credit, stable currency, and sound credit and savings institutions as primary goals of fiscal policy.

The author believes the broader approach to the problem is inappropriate, at least under present conditions, for two major reasons: (a) the tools for implementing a general policy of "full employment" are inoperative and the administrative machinery inadequate; and (b) the special problems of savings and credit institutions are either glossed over or ignored.

Policies pursued in the creation of the debt, including unlimited support buying by the Federal Reserve Banks, "residual underwriting" by the banking system as a whole, pegged interest rates, and the issuing of large amounts of demand obligations, were designed to insure adequate funds at low cost to the Treasury. These policies have been continued with slight modification since the termination of hostilities, and so long as they are operative they preclude the use of open market operations and flexible discount rates to control the reserve position of the commercial banks. The restoration of

control depends upon the reorganization of the debt to obviate "dumping" of securities by either the banks or the general public.

The administrative machinery, including the innumerable organizations and procedures for collecting, budgeting, appropriating, spending, and accounting for funds, has never been appropriate to the managerial task implied in the broader fiscal theories. The author doubts the possibility of creating adequate machinery and is even concerned about the difficulty of accomplishing the simpler task of organizing administration of the debt. Certainly, if the federal authorities were to attempt more, "the probable result would be confusion worse confounded" (p. 170).

Three chapters on the debt and banks and life insurance companies develop the proposition that "the relationship of existing government debt and of possible future deficit financing to institutional savings should be examined on its own merits, as a matter of public policy" (p. 121). While the proportion of the debt held by these organizations has not changed greatly since the beginning of the war, the absolute amount held has obviously grown enormously. This raises anew some questions concerning the functions of banks. Will they again become suppliers of risk credit; or will they, along with savings banks and insurance companies, become merely custodians of the debt and, therefore, wards of the federal government? The life insurance companies in particular, he believes, are likely to become increasingly dependent upon earnings from "governments," unless the inadequacy of those earnings brings further relaxation of existing legal limitations upon life insurance investments.

The general objective of debt management—which in Professor Abbott's view would be reasonably good fiscal policy and difficult enough for present administrative competence—should be to minimize the disruptive effects of the debt. The "disruptive effects" which concern the author most are those associated with the capricious shifting of large amounts of debt, from the public for redemption or sale, and from the commercial banks to the Federal Reserve Banks. Possible measures, collectively designed to place the debt permanently with "strong" non-bank holders, include: (1) complete revision of the policy of issuing demand debt; and (2) continued low, or even lower, interest rates to be compensated for by such devices as special conversion features, tax exemption, and perhaps even better price guarantees. In short, further stratification of the debt to appeal to various types of buyers would be employed to settle the problem of permanency. This reorganization of the debt would make it possible to unpeg the short-term interest rate and restore freedom to part of the capital market.

Two final steps include "unification of fiscal authority and responsibility," possibly by placing executive responsibility under one cabinet member, and "reorientation of financial regulation." Without being specific under the latter heading, the author echoes the idea that we have accumulated much regulation inimical to the development of an "energetic, optimistic, expanding economy" (p. 187) which is essential to diminution of the debt burden.

Management of the Federal Debt is a provocative essay not beyond the

competence of the general reader yet worthy of the attention of the specialist. While it is partisan in tone, particularly in its criticisms of general fiscal theory and by implication of the "New Deal," there is little with which to quarrel. Some proposals which are at least debatable, for example the resurrection of tax-exempt federal securities, are suggested for study; but dogmatic prescription is limited. It should be noted, however, that statements are sometimes so broad as to be misleading. For example, ". . . in the post-war period it may be possible [through the use of trust funds] for the government to run with a deficit of as much as $3 to $4 billion without the Treasury's going to the market for funds to cover the deficiency" (p. 38). Obviously, this would be possible only if the deficit were a *general fund deficit* covered by *surplus receipts* to trust funds. This is not a serious criticism. The book as a whole is an invitation to further study, and as such, it is wholly successful.

HERBERT W. HARGREAVES

New York, N.Y.

Allocation of Income in State Taxation. By GEORGE T. ALTMAN and FRANK M. KEESLING. (Chicago: Commerce Clearing House, Inc. 1946. Pp. 263. $4.00.)

This book offers a first-rate description and evaluation of an involved, controversial phase of state income taxation. As practitioners and students of tax law the authors find "utter chaos" in state legislation dealing with the allocation of individual and corporate income for taxation, unless the income and its recipient are solely and unequivocally within one state. "Overlapping and conflicting jurisdictional claims are common. Diversity in apportionment methods and practices are widespread. . . . The possibilities of double and even multiple taxation on the one hand and complete escape from taxation on the other are staggering." These results come from the exercise of autonomy in taxation by the forty-eight states.

Such conclusions by the authors rest upon an explicit examination of state statutes and court decisions relative to each aspect of the subject. Constitutional limitations and allocation of income according to domicile, residence, and source of income are concisely inspected. Not only are the principles of separate accounting methods and apportionment formulas discussed in detail, but also their applications in each of the states are briefly given. Deductions from income, credits for taxes paid other authorities, and interdependent income taxes receive a chapter each.

It is appropriate that these obviously well-informed authors should offer suggestions about improved tax procedures. In the belief that a solution through interstate agreements is only a remote possibility, they propose that through the interstate commerce clause Congress should prescribe in detail a uniform pattern of state income taxation. States failing to conform to this pattern should be denied taxation of individual and corporate income derived from interstate commerce. The uniformity would be directed particularly toward a definition of "resident" and the apportionment methods to be used. Also, Congress should create "a federal tribunal of first

resort for resolving, on petition by the taxpayer, conflicts among the states in determination of either law or fact."

These proposals by Mr. Altman and Mr. Keesling to find some relief from snarled state income tax laws in action by the highest level of government in this country may well be realized. Indeed, uniformity *via* federal legislation appears inevitable unless state legislators and executives accept as a concomitant of "states' rights" the responsibility of removing legal débris which impairs interstate movements of capital and business initiative.

To my knowledge there is no book on taxation which examines more competently and concisely problems arising from relations between payers of income taxes and the states, and from the multiple sources of income involving questions of allocation. Although occasionally a somewhat involved sentence of the authors requires second reading, for the most part they have written clearly, interestingly. Good judgement is shown in the selection and presentation of tabular material.

V. J. Wyckoff

Washington, D.C.

Money and Banking; Short-Term Credit

Pengeteori og Pengepolitik. By Jørgen Pedersen. (Copenhagen: Nyt Nordisk Forlag. 1944. Pp. 381. Kr. 16.50.)

Professor Pedersen explains in his preface that this book was written primarily as a text in monetary theory and policy for use by his students at Aarhus University. Existing Danish textbooks were seriously out of date, and the author therefore set himself the task of filling this important void. Since it is a void which exists also in our own language, I have had to consider whether Professor Pedersen's book might not, in translation, serve a useful purpose in American universities. For the reasons I indicate below, I concluded that most teachers in this country would not find it altogether suitable for use as a text. But there is a great deal of Jørgen Pedersen in this book, and since he is a writer who has gained considerable renown in the Scandinavian countries, but is not widely known here, it should be decidedly worthwhile to acquaint American readers with his ideas.

I must say that I found the book unsatisfactory for general use as a text because so much of it was treatise, and likewise unsatisfactory as a treatise because so much of it was textbook. To begin with, there is Professor Pedersen's quarrel with the definition of money, which he says is most often defined as "means of payment," but is commonly used to mean "income." He therefore defines money as "income expressed in units of account." To a critic who has pointed out that "the language of economics is so poor in words and so rich in concepts, that one must regard synonyms as a luxury," Pedersen replies that to make "money" a synonym for "income" is preferable to using it to mean two entirely different things. The merit in this

argument is sometimes overshadowed by the greater confusion to which it leads. Thus, Pedersen expects his title, *Monetary Theory and Monetary Policy*, to indicate clearly enough that the book deals with *e.g.*, fiscal, employment, wage, and quantitative trade control theory and policies, as well as with the realm of central banking. His departure from usual terminology is a matter of less importance, however, than his propounding of new theories, or new formulations of old theories, and it is the strong imprint of his own ideas, with often only very slight attention to others', which gives the book the nature of a treatise—but one which is interrupted by the tedious spelling out of well-settled doctrine for the benefit of the new student.

The scope of Part I, Monetary Theory, is indicated by the chapter headings. The first four chapters deal respectively with The Concept of Money, The Creation of Money (by which, the reader must remember, is meant the Creation of Income), Motives for the Creation of Money, and The Significance of Means of Payment. Then follow four chapters headed The Problem of Liquidity, Determination of the Rate of Interest, Can Money be Created without Cooperation by the Banks?, and The Liquidity Concept and the Central Bank. The chapter on the interest rate is a defense of the Keynesian theory. In Chapter IX, Organization of the Central Bank, Professor Pedersen sketches his idea of the "rational" central banking institution (a regular department of the government, with a cabinet minister at the head, no capital funds other than those needed for the Bank's own property, profits to belong to the government, no reserves required by law), but he acknowledges that some concessions, the fewer the better, may have to be made to public superstition.

Then comes a crucial chapter, headed Money and Prices, in which Professor Pedersen demonstrates a bold disregard for qualifications which would safeguard but obscure his conclusions. Thus, he offers a formulation of the theory of prices which states,

$$P=\frac{k}{E}L$$

where P represents unit price; L, the average hourly wage; E, the marginal productivity of labor; and k, the monopoly element.[1] From this he develops his central thesis, which is that in order to achieve stability of prices, the "monetary authorities" must focus their attention primarily on regulation of wage rates. Without denying that this thesis contains an important element of truth, Erik Lindahl points out that the precise formulation given it, which Professor Pedersen describes as general, takes no notice of other costs than wages, and although Pedersen has tried to defend this omission, I find it difficult to agree with his reasoning, which seems to be grounded in the desire not to obscure the practical significance of laying emphasis upon

[1] As Erik Lindahl has already observed, it would be formally more correct to use $(1+k)$ in place of k, in order that free competiton might be indicated by $k=0$, rather than by $k=1$. *Ekonomisk Tidskrift*, 1945, p. 78.

wage costs. Lindahl also reproves Pedersen for giving too slight attention to the attempts to build up a dynamic theory of prices.[2]

Chapters XI to XIII deal with Exchange Relationships with Other Currencies, Further Analysis of the Determination of Exchange Rates, and Fixed and Free Exchange Rates. In these chapters Professor Pedersen gives an able account of the difficulties of maintaining internal stability in a country whose economy is particularly exposed, as is Denmark's, to disturbances from without. In a chapter on Inflation and Deflation, he warns against the danger of hitching wages to a cost-of-living index. His final chapter on theory is The Value of Money. Professor Pedersen objects to identifying the value of money with its purchasing power, and prefers to identify it with wage rates. "One cannot under all conditions maintain the purchasing power of a day's wages, but one can maintain the wage rate, the currency's purchasing power of labor. And should it be changed, it would not be impossible to change contract obligations in the same degree. If a business man, *e.g.*, has borrowed money, and subsequently the wage level is doubled, the debtor will not be prejudiced by having to pay his creditor twice the amount he borrowed, since his sales revenue also will have doubled."

In the second half of his book, Professor Pedersen discusses four general objectives for monetary policy: (1) maintenance of the gold standard, (2) stabilization of the price level, (3) regulation of the price level in inverse relationship to productivity, and (4) stabilization of economic activity with full employment. The first he rejects outright; Professor Pedersen is all in favor of flexible exchange rate policy, and indicates that he would have preferred the Keynes to the White Plan (still in the discussion stage when his book was written). He also rules out stabilization of the price level as a proper objective of economic policy, principally on the grounds that its accomplishment would under certain conditions require downward wage adjustments, which he regards as impractical.

The third proposal—regulation of the price level in inverse proportion to productivity—he identifies with elimination of the monopoly element in prices and with wage stabilization (this follows if you accept his simplified price formula). "With the experience we have gained in price regulation, and with the machinery developed during the war, it should certainly not be impossible with a good measure of success to regulate prices also under greater or lesser monopolistic conditions in accordance with marginal costs, thereby eliminating the monopoly element in prices, or at least keeping it fairly constant." Wage control could best be achieved by allowing labor and management to negotiate wages within each branch of industry, their decisions being subject to approval by the government. This system would differ from the one introduced in Denmark during the occupation in that (1) no wage settlement would be valid without official approval, and (2) the government could disapprove an agreement reached by labor and management, and substitute its own wage terms. Such a general program for mone-

[2] The discussion between Lindahl and Pedersen is in *Ekonomisk Tidskrift*, 1945, pp. 76-84 and 245-60.

tary policy is "not at all a bad goal to set, and it should be possible to move at least some distance toward achieving it."

Professor Pedersen subscribes most completely, however, to the goal of stable economic activity at a high level of employment, and he does not stop with compensatory fiscal policy as a means of achieving it. First of all, the State must have full control over the international balance of payments, both as to capital movements and the flow of trade. State trading is preferred to a complicated system of licensing, taxing, and subsidizing private trade. He adopts Keynes's suggestion that the Central Bank might regulate long-term rates of interest by fixing prices at which it would buy and sell strategically selected private issues. Present-day social security schemes do not serve adequately to maintain consumer demand, and should be broadened into a system which would grant all persons unable to find employment the full current wage for unskilled labor. Persons receiving such benefits would be obligated to accept any type of work of which they were capable, anywhere in the country, at the going rate of pay. Special allowances would be granted for moving costs and re-training. Such payments should be financed out of the Central Bank. "Wage control necessarily will be a feature of a policy which aims at maintaining full employment. There can be scarcely any doubt that the time when labor unions and employer associations were strictly fighting organizations has passed."

It will be interesting to see what influence this book has on Danish policy, for Denmark is currently beset with many of the problems Professor Pedersen treats. Presumably he would recommend more rigorous wage control to forestall a further rise of krone prices, but in order to bring Denmark out of her balance of payments difficulties would he prefer devaluation of the krone or an extension of State trading monopolies? Unfortunately, Professor Pedersen's book was written before the establishment of the Fund and the Bank, but I am inclined to think that he would regard these as offering inadequate guarantees for so exposed a country as Denmark.

ROBERT BEAN

Washington, D.C.

La Doctrina Funcional del Dinero. By GERMÁN BERNÁCER. (Madrid: Instituto de Economía "Sancho de Moncada." 1945. Pp. 364.)

Señor Bernácer's work in monetary theory, which dates from 1905, was first called to the attention of English-speaking economists by D. H. Robertson in an article in ***Economica*** of February, 1940. Robertson's paper, however, dealt with Bernácer's views of the 'twenties. In the present work, the author presents a revision and synthesis of his earlier position. The study stamps its author as one of the most capable continental technicians in the field.

Bernácer develops his own views on "functional money" in the first half of the volume. The second part of the book contains a detailed examination and critique of the doctrines of Keynes, Hawtrey, Robertson, and a few others. The principal emphasis, as is to be expected, is on Keynes. It is this

second part of the study which will probably be of most interest to students of money and cycle problems.

A functional approach to monetary matters avoids treating money as a homogeneous mass in which the only significant results, for analytical purposes, are regarded as a function of the quantity of money. Bernácer repeatedly points out that clarity of thinking about monetary matters requires that recognition be given to the fact that any monetary stock consists of functionally different parts. To illustrate: potentially, the money value of current production is always identical with the money value of demand. In the market, however, the actual behavior of individuals is such that the money value of demand generally falls short of or exceeds that of current production. The result is that current production is not always absorbed at unchanged prices. Unsatisfactory operations do not necessarily derive from inherent weaknesses in our monetary system. Rather, they generally derive basically from confused thinking about the several functional rôles played by different money flows. One of the most serious misunderstandings, as Bernácer sees it, concerns the financing of requirements for circulating capital. He considers at some length the case of savings used to increase circulating capital. Savings so employed invariably result in market depression, since the flow of goods and services is increased simultaneously with the contraction in monetary demand occasioned by the savings. To remedy situations of this sort, Bernácer prescribes the use of newly created money for the financing of increased circulating capital (pp. 82, 320). And such increased circulating capital should be continuously reinvested if the expanded output of final goods is to be maintained at unchanged prices. In contrast, savings should only be employed to increase the community's stock of fixed capital.

It would take us too far afield to appraise Bernácer's position on this matter. However, he seems to be vulnerable for (1) implying that savings always bulk large in the financing of circulating capital, and (2) having neglected costs and the state of competition. Both of these latter factors obviously can be used to account for price variations with changes in output. Yet monetary theorists would do well to give some attention to his position with respect to the problems of financing the different types of capital requirements.

The first part of the volume also contains a considerable amount of suggestive material dealing with investment, the impact of balance of payments changes, and what the author calls the "dynamics of price levels." The last mentioned section develops one species of period analysis.

In the second half of the book, Bernácer engages in formal monetary controversy. The Keynes of the *Treatise* is preferred to the Keynes of the *General Theory*. It is alleged that in the latter Keynes really reverts to a classical position, and that this would be more widely recognized but for the new terminology employed. Bernácer does not here develop his position in systematic fashion, but it seems to amount to the following: (1) Keynes abstracts from the time element. The equality of savings and investment logically prevents one from considering economic dynamics, except in a

Robinsonian economy. (2) Nothing but permanent equilibrium obtains if it is held that savings equals investment at the same time that the value of current production is equated to current income. But the facts everywhere disprove this double identity. In the *Treatise*, however, Keynes's position is more congenial. Bernácer there detects many matters of form that are similar to his own; in particular, one of Keynes's fundamental equations is identical with an equation developed by Bernácer in 1922.

Our author is particularly severe in his criticism of the concept of liquidity preference. He claims that it is used mainly to enable Keynes to avoid circular reasoning in connection with saving and investment (p. 273). Moreover, Bernácer fails to comprehend how one can have invested savings and still have them in liquid form (p. 279). He also quotes Robertson ("the rate of interest is what it is because it is expected to become other than it is; if it is not expected to become other than it is, there is nothing left to tell us why it is what it is"[1]) to prove that liquidity preference is simply a "metaphysical entity created by a fertile imagination" (p. 300). Without attempting to go into the refinements of the matter, it is clear that Bernácer is on shaky grounds as regards the meaning of this concept. The world abounds with problems centering around the presence of idle balances, and the Keynesian concept has proved very helpful in analysis of the motives and conduct of the holders of liquid balances. The concept also helps us to account for borrower difficulties under some important circumstances, as well as some of the peculiarities of the structure of interest rates.

The foregoing provides a sample of Bernácer's critical analysis. Students of monetary economics will do well to consult the volume, since virtually the whole of the Keynesian apparatus is subjected to searching—and sometimes highly suggestive—criticism. There are also a number of interesting critical comments on central features of the writings of Hawtrey and Robertson.

VIRGIL SALERA

Miami University, Ohio

[1] D. H. Robertson, *Essays in Monetary Theory* (London, 1940), p. 25.

International Trade, Finance and Economic Policy

International Cartels. By ERVIN HEXNER. (Chapel Hill: Univ. of North Carolina Press. 1945. Pp. xiv, 555. $6.00.)

This book, written by a careful and experienced student of the problem, presents (in 178 pages of "general considerations," 212 pages of "case studies" and 140 pages of "appendices") a broad survey of international cartels in the late 'thirties and a rather persuasive argument in support of a policy of open-mindedness toward cartels in the period just ahead. Dr. Hexner is unwilling to accept the sweeping condemnation of all cartels on economic (restrictive) and political (anti-democratic) grounds which has been advanced in many recent works on the subject, and doubts both the

desirability and the probable effectiveness of any overall program of enforced competition in the international field. He contends that careful inquiry should be made into the actual situations which have produced (or which might suggest the institution of) particular cartels, and that conclusions should be reached with reference to each in the light of the peculiar characteristics and forces which surround it, rather than that all cartels should be accepted or rejected on the basis of across-the-board, *a priori* considerations. Translated into a program of action, this approach emerges in the form of authorized cartel operation under combined national and international regulatory supervision designed to appraise effects, and to forestall restrictive practices and to protect outsiders and consumers. Dr. Hexner's case and proposals are summed up in a long series of propositions on pages 170–78.

There is little chance that those who disagree fundamentally with the private cartel solution for the problem of market instability will ever get together with Dr. Hexner despite the apparent reasonableness and objectivity of his approach. Much of the analysis running through the first part of the book strikes one as having only formal relevance—as being, in fact, rather tediously academic. But the proposed program of experimentation is far from academic, and therein lies its principal danger. In proceeding, by Dr. Hexner's method, to discover *what policy to adopt* with reference to private international cartels, we are in fact *adopting a policy*—a policy totally at variance with our traditional position on domestic monopolies, and one from the processes and far-reaching consequences of which we would find it extremely difficult to extricate ourselves if events should (and I think they would) dictate such a course.

The issue seems to be squarely drawn: Dr. Hexner has faith in the possibilities of supervized private cartels; those on the other side see only danger in, rather than a need for cartelization, and are decidedly skeptical of the possibilities of effective control by government authority. I belong in the latter group. The arguments on both sides have been spread lavishly in recent months and there is no occasion to list them here. With reference to the particular slant which Dr. Hexner emphasizes, *i.e.*, the objective, experimental approach, it seems worth while to offer only the following additional comment: Exactly what can we hope to gain from experimentation of this type? What more do we need to know about the probable effect of private cartelization than has been disclosed by the centuries of experience with monopoly which mankind has already enjoyed? What more do we need to know about the difficulties inherent in regulation by international authorities of the details and minutiae of private marketing and pricing than we can gather from the records of the Interstate Commerce Commission, the Federal Power Commission, the State Utilities Commissions, the Office of Price Administration and the War Production Board—all of them operating under conditions infinitely simpler and more auspicious than those which would face any international authority seeking to do a really effective job of supervision. Frankly, I see in Dr. Hexner's approach and program very little beyond the sanctifying of restrictive practices and the firm es-

tablishment of vested interests (of the sort which the tariff has mothered for decades) to plague us for decades to come.

At that, I find Dr. Hexner's discussion to be an excellent treatment of his side of the case; and his case studies and appendices are decidedly useful.

Ben W. Lewis

Oberlin College

National Interest and International Cartels. By Charles R. Whittlesey. (New York: Macmillan. 1946. Pp. vi, 172. $2.50.)

This work is a brief and rather general analytical essay on the origin, nature, and effects of international cartels and on contemporary public policy issues which they have engendered. It is not a detailed research report on cartels and their problems. As a simplified and relatively nontechnical exposition and interpretation of a difficult economic problem, it is a useful addition to economic literature.

The author begins with a statement of the basic policy issues with which he is concerned: Should international cartels be given legal standing by our government? If so, by what measures and subject to what limitations? If not, how shall American participation in cartels be prevented? The first chapter poses these questions. Successive chapters deal with the general economic effects of cartelization; with the effects of cartel organization on national security and international peace; with the alleged desirability of American participation in cartels as a means of promoting foreign trade; with the relations between cartel organization and the patent system; with Webb-Pomerene associations and intergovernmental commodity agreements; with various proposals concerning public policy toward cartels; and with the author's own recommendations for policy. The treatment consists largely of a simple exposition of basic information and elementary conceptions pertinent to each topic, together with the author's reasoning and conclusions on various issues. No detailed or exhaustive analysis of the various subjects is attempted.

The gist of Professor Whittlesey's argument may be summarized, with the omission of numerous qualifications, as follows. Cartel organizations, international or otherwise, are generally inconsistent with the effective working of a free economy, and should be discouraged except in very special circumstances. Limited and strictly provisional approval, however, may be given to Webb-Pomerene associations and to some intergovernmental commodity agreements, provided adequate safeguards against abuse can be devised and imposed. The contention that American firms must ordinarily participate in international cartels in order to gain foreign markets is probably groundless. The adverse effects of cartel systems on national security and international peace have been exaggerated; it is the economic rather than the political implications of cartels which clearly condemn them. Appropriate policy measures toward cartels should include: (1) establishment of an international organization, with United States participation, to study and supervise other people's cartels; (2) international public expression of

the anti-cartel position of this country; (3) an internal administrative organization including separate agencies of the State, Commerce, and Justice Departments and of the Tariff Commission to deal with various phases of the international cartel problem as it affects our economy and our businessmen; (4) reform of the American patent law, in the direction of compulsory licensing, to reduce the impetus which patent rights provide toward cartel formation; (5) study of the Webb-Pomerene act with a view to amendment or possible repeal; and (6) legislative reaffirmation of the Sherman act philosophy as the basis of American business practices abroad. Administrative discretion in approving international business agreements should be limited, and should be guided by a philosophy of unwavering opposition to restrictionist policies.

Within the limits of a brief summary treatment, the author supports these contentions, and in general a strong and relatively unqualified anti-cartel position, in a sincere and able manner. Economists who do not already accept this position may be reluctant to accept certain of the author's conclusions until they are supported by much more detailed empirical evidence, but should at any rate find in them interesting hypotheses. The student and the citizen interested in public affairs should find the work valuable as a good brief introduction to the international cartel problem.

JOE S. BAIN

University of California, Berkeley

World Monopoly and Peace. By JAMES S. ALLEN. (New York: International Publishers. 1946. Pp. 288. $3.00.)

With the emergence of the Soviet Union as a dominant force in world affairs, greater interest than formerly will attach to the writings of economists who argue the Soviet point of view on current international issues. Such a writer is James S. Allen, whose latest book might well have been entitled *New Data for Lenin's Imperialism*, had not that title been preempted for an earlier work by two Soviet writers.

Drawing, as Lenin did, on "irrefutable bourgeois statistics and admissions by bourgeois scholars," Mr. Allen has produced an interpretation of certain post-war international policies of the United States and Britain which runs exclusively in terms of the appetite of monopoly capitalism for imperialist aggrandizement. It is Mr. Allen's thesis that American and British policies toward Germany and Japan, Anglo-American economic relations, American opposition to international cartels, and the general American program for the rehabilitation of world trade, all fall neatly into place as manifestations of "the economic expansionism of the monopoly giants." The United States, it appears, is bent on nothing less than the achievement of "world hegemony."

Mr. Allen turns first to Germany. The source of German aggressiveness he finds in the expansionist ambitions of the German monopoly capitalists and cartel leaders. These monopolists, with the aid of their British and American cartel partners, organized the rearmament of Germany after the

Treaty of Versailles; they financed Hitler's rise to power; under the Third Reich, they "became the unchallenged overlords of both the state and the economy." Although the uneasy alliance of German, British and American capital had as its purpose the "building up of the German outpost against the Soviet Union," German and British monopolists met in Duesseldorf in March, 1939, to plan a combined onslaught on American industry. The threat to American imperialists of an Anglo-German combination, was, in Mr. Allen's view, "one of the leading factors explaining the growing opposition to the appeasement policy in American big business and Government circles following Munich and Duesseldorf." How these developments culminated in a British declaration of war, not on the United States or the Soviet Union, but on Germany, Mr. Allen does not make clear.

Mr. Allen's conception of the significance and objectives of German participation in international cartels is of particular interest. In the first place, since the monopoly capitalists were the real rulers of Hitler Germany, there was no conflict of interest as between big business and the government. Hence, the German cartel leaders used their international business connections in a variety of ways to strengthen Germany and weaken her potential enemies in preparation for the military conflict to come. Thus, German control over international cartels was put to use to facilitate the process of German rearmament; to conduct industrial espionage abroad; to restrict the development of strategic industries in other countries; to disseminate nazi propaganda; and to acquire foreign exchange to finance the acquisition by Germany of strategic raw materials.

This thesis is similar in most respects to that propounded during the war by the Antitrust Division of the Department of Justice and the Subcommittee on War Mobilization ("Kilgore Committee") of the Senate Committee on Military Affairs, which has exercised considerable fascination for those who incline toward the plot theory of economic history. An alternative view, which, though less dramatic, would appear better to accord with such facts as are known, is that German industrialists used their cartel connections primarily to augment their profits (as did their British and American partners); that such effects as these cartel agreements are alleged to have had on the military potential of Germany and her future enemies were largely fortuitous and of minor significance, and were counterbalanced by other effects which operated to the detriment of German military superiority. This thesis may be reconciled with such troublesome facts as the reciprocal acquisition by American firms of German technological information through the medium of international patents and processes agreements; the reciprocal acquisition by British and American firms of information about German industry which was made available to their respective governments in the course of the war; and the concealment by German industrialists of large holdings of foreign exchange at a time when the Hitler government was making strenuous efforts to mobilize such assets.

The case against international cartels has not been strengthened by their characterization as advance agents of military aggression; on the contrary, this doctrine may well have served only to compound confusion and to

weaken the entire anti-cartel case, including the well-documented demonstration that cartels tend to restrict international trade, to bring about an inefficient allocation of resources, to aggravate maldistribution of income, and to generate international frictions.

Mr. Allen then proceeds to an examination of the post-war policies of the United States and Britain with respect to the treatment of defeated Germany. The framework of his analysis is disarmingly simple. Those acts and utterances on the part of the two great imperialist powers which reflect a desire to curtail sharply the German economic potential for war (such as their adherence to the Potsdam agreements) are simply manifestations of a determination to eliminate a powerful imperialist rival from world markets. On the other hand, those acts and utterances (such as the report of the mission headed by Professor Calvin Hoover) which imply dissent from a draconic policy of economic disarmament, are to be regarded as part of a design to build up Germany as a bulwark against the Soviet Union and as a preserve for imperialist exploitation by the United States and Britain. "Such," says Mr. Allen, "are some of the contradictions which beset the Western powers in Germany." For those ingenuous persons who imagined that the Western powers were seeking a formula which would both deprive Germany of the means of making war while allowing her the means of earning her own living, Mr. Allen draws aside the veil and displays the Anglo-American imperialists at work.

The objectives of the American occupation of Japan are no less reprehensible. There Mr. Allen finds that the American monopolists have conspired to maintain the Zaibatsu in power, and that American policy in Japan has been formulated "with a view to preserving this key imperialist position of East Asia as a stepping-stone for American penetration of the Far East and as a barrier against the Soviet Union."

The most interesting section of Mr. Allen's book—and the most disturbing, if Mr. Allen's views may be taken even roughly to coincide with those of the Soviet government—is the analysis of the American program for the rehabilitation of world trade. He summarizes this program as "the four freedoms of economic expansionism" . . . "free enterprise, free competition, free access and free trade." "Big business and government," he feels, "are engaged in a crusade to impose this program on the rest of the world." The United States, economically the strongest nation in the world, a land of "giant trusts controlling every important branch of finance, industry, and trade," has set for itself no less a task than that of achieving "world hegemony."

"The liberal flavoring of the program tends to obscure its essence." The anti-cartel features of the American trade program embody the efforts of American imperialists "to perpetuate the wartime disruption of the cartel framework and to replace it with a new structure in which the prime position of American monopoly is registered." American industrialists, it appears, are now dissatisfied with the share of the world market allotted them in the pre-war cartel agreements, and hope by destroying the pre-war cartel system "to obtain a much greater share of the world market and open new

spheres of penetration." When that stage is reached, American monopoly capital will presumably establish "a new cartel system which wouuld serve its expansionist and political aims." The "free trade" and "free access" objectives are equally fraudulent. What the United States really desires is "the removal of trade and other barriers which restrict the freedom of the expansionists." By implication, Mr. Allen commends "the liberation governments of Europe" and "the semi-dependent nations" for "maintaining restrictions, barriers, and government controls of the kind which will safeguard their national economies, domestic resources and political sovereignty from domination by foreign monopoly-capitalist groups and countries."

Mr. Allen's account may well coincide with convictions which are seriously maintained in Moscow. The Soviet government has been singularly chary of making known its views on the issues currently being debated in connection with the projected establishment of an International Trade Organization; if these views, when fully revealed, should follow the outline of Mr. Allen's indictment, the prospects for realization of the goals of the American *Proposals for Expansion of World Trade and Employment* will be even less hopeful than they are today.

Mr. Allen's case falls apart under the most cursory examination. If the American cartel program evidenced simply the desire of American industrialists temporarily to disrupt the cartel system in order to achieve a redivision of world markets more favorable to themselves, these same industrialists would have had the perspicacity to realize that they could achieve the same results with much less difficulty by breaking with their cartel partners and competing aggressively for business in every part of the world—thus avoiding the necessity of establishing an intergovernmental trade organization whose policies it might be difficult to control. If the United States government were determined as part of its post-war foreign economic policy to foist "free enterprise" on the world, it must have committed at least one overt act in that direction; Mr. Allen cites none, however. Certainly there is nothing in the *Proposals* to lend support to Mr. Allen's charge. On the contrary, it had been asserted with some justice that the *Proposals* tend to encourage socialization, by providing fewer and less effective restraints on the policies of state-trading countries than on those of private enterprise countries.

Much more important, however, is the novel view of the nature of imperialism which underlies Mr. Allen's analysis. Lenin, in delimiting the "essential features" of imperialism, wrote that "The export of capital, as distinguished from the export of commodities, becomes of particularly great importance," and "International monopoly combines of capitalists are formed which divide up the world."[1] Dobb, a Marxist writer of distinction, wrote in 1937 as follows:[2]

"Current politics of 'autarky' and economic nationalism, with their raising of tariff-walls round national or imperial units and their plethora of

[1] V. I. Lenin, *Imperialism, The Highest Stage of Capitalism* (New York, International Publishers, 1933), p. 81.

[2] Maurice Dobb, *Political Economy and Capitalism* (London, Routledge, 1937), p. 244.

quota-arrangements, merely pursue the ideal of the restricted market and the monopolized preserve in a more perfected form; while the now-fashionable balanced-trade agreements and the revived gospel of export-surpluses are explicit recognition of that neo-Mercantilism which has always been latent in modern Imperialism."

Yet Mr. Allen is able to conclude that a program which seeks to reduce barriers, not to foreign investment, but to international trade in goods and services; which seeks to curb restrictive business practices in international trade; which envisages the reduction of tariffs and the general elimination of quotas and balanced-trade agreements—is still essentially imperialist in character. Mr. Allen has implicitly redefined imperialism as comprising all foreign economic policies of capitalist states, irrespective of the objectives ostensibly sought or the substance of the policies. While this permits Mr. Allen to denounce a good many policies, it also entails the debasement of a useful word which has hitherto served to identify a set of reasonably precise ideas.

Why did Mr. Allen not choose to concur generally in the objectives of the American trade program, while predicting that it would be emasculated under the attacks of organized business groups in the United States and elsewhere? By so doing, he could have made his case against monopoly capitalism without doing violence either to facts or logic, and he might have earned for himself a reputation for prophetic insight. This alternative was not, however, open to him. Since capitalist governments are simply tools of the cartel leaders, there is no place in Mr. Allen's dialectical scheme for governmental policies in the Western democracies which are not fully in accord with the objectives of the monopoly capitalists. Indeed, the whole of Mr. Allen's book may be described as an effort to analyze certain international issues in a manner wholly consistent with the major premise that the governments of the Western democracies must at all times serve the interests of monopoly capital. The truth of this proposition Mr. Allen must believe to be self-evident, since he makes no serious effort to adduce evidence in its behalf. Yet it is precisely his unwavering devotion to this major premise which leads him so often from the plausible to the preposterous, and deprives his book of what value it otherwise might have had.

KERMIT GORDON

Williams College

The Industrialisation of Backward Areas. By K. MANDELBAUM, assisted by J. R. L. Schneider. Oxford Inst. of Stat. Monog. No. 2. (Oxford: Basil Blackwell. 1945. Pp. viii, 111. 10*s*. 6*d*.)

"The first part of this monograph provides a theoretical discussion of the conditions needed and the mechanism of the process of industrialisation of backward areas. The second part gives a quantitative example of such a process, taking south-eastern Europe as the background" (p. iii). In the reviewer's judgment, neither comes off too successfully.

Part A (19 pp.) on the "Economic Problems of Industrialisation" is an interesting general essay, granted the preconceptions from which it appears

to be written. These seem to be chiefly three. The first is that the familiar Keynesian theses relating to fiscal policy and effective demand can be applied to peasant agricultural economies without difficulty (pp. 4–6). The second is that the external and internal economies of large-scale production are enormous while the diseconomies, especially on the side of management and control, are virtually zero. Moreover, these net economies are considered realizable in nearly all branches of industry (pp. 8–11). Third, effective industrialisation presupposes State direction and control throughout, with priority schemes, direct labor allocations, "forced saving" devices, rationing and price controls, and whatever other war economy control techniques may be useful. One is tempted to add a fourth preconception also—that consumers' preferences and workers' choice of occupation and residence need not be seriously considered in planning the end result—but this last is more implied than expressly stated. Given these basic assumptions—which many, though not the reviewer, would find acceptable—Part A is a useful general discussion of some of the economic problems of industrialisation. Parenthetically, one is a little surprised to find a resident of the British Isles solemnly emphasiing that " . . . in an open international system advantages once gained tend to become cumulative. . . . " (p. 4).

The hypothetical "model" of the industrialisation process that occupies the remainder of the volume is ostensibly applicable to southeastern Europe as a region, *i.e.*, Bulgaria, Greece, Hungary, Poland, Rumania and Yugoslavia. Actually there are four models, all painstakingly worked out in great detail as to probable production by industries, capital requirements, labor requirements, expenditures out of income, savings, foreign borrowings, etc., and all designed to siphon off 700,000 persons *per annum* from agriculture which is the estimated existing and accruing "disguised unemployment" in that calling. Needless to say, all this gets highly complicated—especially where a figure is pulled out of the air here and a "revised," *i.e.*, arbitrarily changed, figure substituted there (pp. 28, 30–31). But the reader is never sure as he proceeds whether the calculations are meant to be purely hypothetical or relevant, at least remotely, to southeastern Europe. His bewilderment somewhat abates on learning that the "standard figures" (p. 35), for capital, power, materials, and output per occupied worker that underlie most of the elaborate calculations, have been compiled from data for Hungary, Rumania, Canada, Australia, and Palestine. This odd selection of countries is never explained. Yet perhaps it doesn't matter much, since one cannot easily imagine to what use the resulting figures might be put beyond illustrating the purely formal argument of the book itself.

The five-year plan here set forth is supposed to raise national incomes in southeastern Europe as a whole by 50 per cent (above pre-war levels), on the assumption that two-thirds of the capital requirements (estimated at £450 per newly employed worker) come from abroad. But then we are reminded, in conclusion, that "industrialisation in our model is conceived as a process which leads and is directed to the establishment and expansion of modern, mainly large-scale, industry" (p. 90). Even so, such a rate of industrial expansion seems exceedingly optimistic.

While an author is privileged to set his own limits to his work, a book on the industrialisation of southeastern Europe that abstracts, not only from the political, but from all the inherent social, demographic and organizational problems as well, leaves one puzzled. To whom is it addressed and with what purpose in mind? Perhaps it is one of those exploratory studies to suggest what is worth exploring. Yet it seems a little late in the day for that when the topic is industrialisation.

NORMAN S. BUCHANAN

University of California, Berkeley

Business Finance; Insurance; Investments; Securities Markets

Financing Business during the Transition. By CHARLES C. ABBOTT. (New York: McGraw-Hill. 1946. Pp. xii, 141. $1.75.)

This book is one of the research monographs written for the Committee for Economic Development. It consists of three parts; an analysis of the financial developments during the war, an estimate of the demand for financing in the transition, and a discussion of the problems of meeting these demands in both the short- and long-term capital market. The transition period includes the "conversion" period and part of the "catching-up" period; in short, the next two years or so. The financial needs of business are those required to support a "satisfactory" level of employment and output, which is taken to mean fifty-four million jobs and a national income of $140 billions.

After discussing financial developments during the war period, Mr. Abbott sets himself to estimate how much additional capital assets (fixed and current) will be needed to produce and support this post-war income. As a first approximation he assumes that three pre-war ratios, (1) gross receipts of corporations to national income, (2) corporate fixed assets to gross receipts and (3) current assets to gross receipts, will be operative in the post-war period (although they were substantially altered during the war).

Assuming a national income of $140 billions, these relationships require $75–100 billions of fixed assets and $15–$20 billions of current assets over the volume existing at the end of 1944. Allowing for changes in these ratios as a result of the war, Mr. Abbott reduces these deficiencies to $50 billion fixed assets, and $15 billion current. This sum of $65 billions measures the post-war financial requirements.

There are so many "ifs" in the current situation that it is impossible to predict what the actual demand for capital will be, and how much will have to be met from outside sources (pp. 61–68). But in any case, Mr. Abbott thinks the supply of liquid resources will be ample. The market, however, may need some revisions of its practices if this supply is to be effective.

In regard to short-time credit, banks must develop a greater "mobility" of funds, *i.e.*, a wider use of all accepted techniques, and a greater readiness to use sound but unfamiliar types of credit. They should be (perhaps al-

ready are) more sensitive to the needs of small business. More initiative on their part would avert the use of government guarantees which Abbott thinks are too "rigorous a remedy" for the size and character of the problem.

As for long-time lending, here too are ample funds. But they are unduly inflexible, especially institutional savings with their tendency to move in excessively restricted channels of investment. Personal investment too, with its disproportionate emphasis on liquidity, has become inflexible and unenterprising. Mr. Abbott would have public policy directed to encourage a larger volume of new-money securities, of equities, and of the too much neglected securities of small- and medium-sized business. We need revision of the tax structure, improvements in the techniques of the stock market, and other appropriate encouragements set forth in his last chapter.

This is a competent, readable and thought-provoking book. The statistical computations, subject as they are to a high obsolescence rate, will need continuous revisions to be of much use. The most valuable part of the book is the analysis of the capital market, and how its effectiveness could be increased, especially for the small- and medium-sized business so dear to the CED (and to us all).

J. A. Estey

Purdue University

Public Control of Business; Public Administration; National Defense and War

Arsenal of Democracy: The Story of American War Production. By Donald M. Nelson. (New York: Harcourt, Brace. 1946. Pp. 439. $4.00.)

This is a chronicle of Donald Nelson's part in mobilizing the American productive potential for World War II. The treatment is primarily chronological, although the first and last chapters are taken out of order. Beginning with the detailed doings of Mr. Nelson on January 13, 1942 (the day the President asked him to be chairman of the newly established War Production Board), roughly the first half of the volume is devoted to filling in the background from 1940 and the "phony war" through the defense period and the steps leading up to the creation of the Board. Succeeding chapters are given over to such particular aspects of the Board's work as the early conversion problems, shipbuilding, rubber, a case history on the Oerlikon gun; and to such general topics as labor and management, the dollar-a-year man controversy, materials problems, scheduling, and reconversion. The last of these brings the story down to Mr. Nelson's departure from the Board; but in order to close the book on the timely note of relations with the U.S.S.R., Mr. Nelson retraces his steps a bit and tells of his own impressions of Russia and the Russians as derived from two trips to the Soviet Union during his tenure with the WPB.

As a personalized narrative of a series of stirring events in which Mr. Nelson played an important part, the book is usually interesting and frequently fascinating; as a systematic analysis of the government's relation-

ship to industry in the mobilization effort, it leaves much to be desired. In fairness, it must be emphasized that Mr. Nelson did not attempt the broader job. His foreword calls the volume "a personal account of what I saw, heard, and experienced. . . . " It is also, though he does not say this, a defense of some of his most-criticized decisions and policies as chairman of the Board.

Although he nowhere summarizes these criticisms or sets out to answer them methodically, he treats each more or less directly in the course of the volume. I should like to list the more important ones and to indicate the replies suggested by Mr. Nelson's discussion.

(1) *The WPB failed to take over or to control sufficiently closely the all-important function of procurement.* Although there is some difference of opinion as to the extent of WPB's power over procurement under the original executive order, Mr. Nelson makes it clear that he thought he had the power to take over the function directly if he wanted it and that he was certain of the President's backing had he chosen to do so. He decided not to, however, for several reasons. Bernard Baruch's advice that "civilians should never sign Army contracts" impressed Mr. Nelson and "sank into and anchored itself in my mind, and I never deviated from it" (p. 103). Moreover, he says, such an attempt would have increased the friction between the civilian and the military agencies; the proposal did not take into account the close relationship between procurement and inspection, and the inescapability of military exercise of the latter; it would have generated a complicated legal tangle; it would have required new legislation; and, at best, it would have taken at least six weeks to make the shift-over to an effective civilian purchasing organization. "In theory, civilian control of military procurement was highly desirable, and in peacetime, with no war emergency in sight, it doubtless would be possible to set up a procurement agency of the kind many people wanted to see in 1942" (p. 200). The certainty of "ruinous delay" in getting it done in that critical period, together with his own confidence that he could obtain satisfactory results through consultation and coöperation with the military, led him to what he has always thought was the right decision (p. 201).

(2) *Mr. Nelson delegated too much of his originally broad authority, scattering controls so widely that effective coördination became impossible.* Responding to the frequent charge that he frittered away his powers, Mr. Nelson says, "of my own initiative I shed controls and authorities not directly germane to my principal function (which was war production) as rapidly as I could be sure that they had been placed in competent hands. This was done not to escape responsibility, but to allocate responsibility in such a way that the administrative capacity of no one person—including myself—would be spread so thin that it would lose its tensile strength" (pp. xi–xii). His task, as he conceived it, called for coöperation among all the agencies sharing such responsibilities, rather than dictation by one. "The popular idea—popular in 1942—of a man with a big stick cracking down on innumerable other government officials and compelling them to carry out his orders, always struck me as unrealistic" (pp. 371–72).

(3) *In general, Mr. Nelson was too reluctant to use either his original powers or those which he did retain, with the result that mobilization of industry was attended by unnecessary delays and hindered by lack of firm leadership.* Mobilization had to be achieved, says Mr. Nelson, within the framework of the American way of life. "As I understood my job, it wasn't up to me or to WPB to *tell* industry how to do its job; it was our function to *show* industry what had to be done, and then to do everything in our power to enable industry to do it, placing our chief reliance on the limitless energy and skill of American manufacturers" (p. 208).

(4) *The wide use of dollar-a-year men resulted, if not in actual discrimination and dishonesty, then in excessive industry-mindedness on the part of those on whom the nation relied to control industry in the public interest.* Of this, Mr. Nelson says flatly, "In my opinion, it would not have been possible to organize the Board with satisfactory efficiency if the use of the dollar-a-year men had been denied to us" (p. 331). He goes into some detail in the matter of the controversies and legislative investigations arising out of this problem, and concludes characteristically that the net result was good. Again, if the tempo of the war had allowed time, a better arrangement might have been worked out; but under the circumstances the elimination of the dollar-a-year men might well have jeopardized the success of the entire program. "I have never known a dollar-a-year man who I thought was dishonest or who would have consciously put the interests of his own company ahead of those of the nation" (p. 340).

(5) *The Board was unduly influenced by a "business-as-usual" attitude which slowed conversion and delayed needed measures distasteful to business until the necessity for them was overwhelming.* The "business-as-usual" charge was most vigorously levelled in connection with early difficulties in industrial conversion to war production. Mr. Nelson defends the record as a whole on the ground that the "seeming reluctance" to convert was due largely to the fact that the military services themselves were not proceeding as rapidly as the civilian "all-outers" urged, and did not have munitions contracts ready to replace the production which would have been eliminated by drastic curtailment orders. In the case of assembly-line industries, "partial conversion" was a false concept. In any event, once the need was fully recognized and was accompanied by actual or prospective military orders, conversion moved ahead satisfactorily.

(6) *The Board was repeatedly torn by internal dissensions which hampered the effective formulation and carrying out of mobilization policies.* On these dissensions, Mr. Nelson takes a benevolent attitude which is almost fatherly. There were not, he says, as many as were reported; some of the rumors were inflated by the press and others may have been planted or inspired by those who wished to injure the Board. As to those which did exist, he emphasizes that they were due primarily to the differences in personalities, backgrounds, and views with which he purposely surrounded himself. Out of such disagreements came the necessity of examining every side of an issue. "I doubt if time was lost or the Board's efficiency much impaired, except in rare instances, by these ructions. They may have saved time by

preventing the prolongation of mistakes that would have wasted time later" (p. xiv). And no matter how sharp the discussion of these differences, he never once thought that any of his associates acted except from the best of motives or "carried with him from former business, professional, or personal affiliations the impulse to place the welfare of previous interests above the welfare of his country" (p. xv).

(7) *The over-all results of the war production and procurement programs were to favor larger concerns and to damage small business in the American economy.* The necessity for speed, says Mr. Nelson, dictated first reliance on large manufacturing concerns. He concedes that smaller plants were not brought into the war program to the extent desirable. His ultimate answer is what the lawyers would call a demurrer—that "our concern was not the preservation of small or large business as such, rather it was the doing of everything in our power to preserve this country of ours where both kinds of business had been permitted to exist side by side . . . " (p. 277).

(8) *In its most important decisions among conflicting claims for productive resources, the Board was dominated by the military services.* Here Mr. Nelson makes his most forthright criticisms of the mobilization effort. The whole question of who should control the economy in time of war was repeatedly raised; of this he says, "The military men will exercise that control if they possibly can, and it is a job which falls outside of their competence. I have no hesitation in saying that from 1942 onward the Army people, in order to gain control of our national economy, did their best to make an errand boy of WPB" (p. 363). The effectiveness of WPB's actual control over the military procurement programs is illuminated by Mr. Nelson's comment that "I can truthfully say that the Armed Services never acquainted me with any of their inside plans as to their requirements—not even after I became Chairman of the War Production Board" (p. 131). Here he makes one of the relatively few recommendations offered in the book: in the event of another war "at least one or two civilians who are charged with industrial production should be vouchsafed all of the details of the Army's requirements, not after they have been formulated, but during the process of formulation." This he calls an "indisputable imperative" (p. 131). Civilian control over the economy and undivided power over priorities he describes as the two factors without which a war economy cannot be successfully conducted (p. 367). Such civilian control as was exercised by WPB over the Army was achieved largely by negotiation, consultation, and persuasion. Mr. Nelson at one point reveals his belief in the necessity of this approach by saying, "even if I asked the President to use his authority to compel the Army to do what I felt was necessary in order to meet the war production program, that would not necessarily provide a solution. To speak frankly, the Army could at any time sabotage any program I set up" (p. 385). The battle over reconversion policies which culminated the long controversy with the military was in his opinion largely lost by the WPB, with the result that the military to a great extent took over control of the economy and forced through decisions which greatly contributed to the difficulties of the reconversion period (p. 391).

Except for these references to the difficulties with the Army, however,

the general tone of Mr. Nelson's book is one of sweetness and light, of tolerance and geniality, of patient amusement over the antics of well-intentioned and high-minded men who may have differed over minor points but who never really disagreed on any important issues. As a result, the reader is likely to get the impression that, so far as the internal struggles of WPB and its sister civilian agencies (as well as their relations with the business world) are concerned, Mr. Nelson is either consciously pulling his punches or was actually unaware of the existence or significance of many basic differences of opinion which tortured the so-called "working levels" of the mobilization agencies. Everything appears to have happened for the best in a public-spirited partnership between government and business in which there were only minor irritations and inconsequential internal "ructions" that did not measurably affect the victorious battle of production. Perhaps this is because the book is aimed at the general public and is therefore primarily narrative rather than analysis, reminiscence rather than assessment, encomium rather than critique. Or perhaps Mr. Nelson has achieved a better perspective than some of his associates in the mobilization effort. But to many who were involved in the process, this seems a somewhat idyllic picture of what were to them serious differences of opinion over vital issues which were not always resolved so as to maximize the war effort and facilitate the post-war transition.

Mr. Nelson's ultimate rebuttal is, however, unanswerable. We did win the war, and we did supply our armed forces with all the necessary implements of destruction without seriously damaging the civilian economy. Perhaps it is true, as Mr. Nelson says, that "The big job got done, and that is all that matters now to anyone" (p. 390). One is nevertheless permitted to wish that, from his unique vantage point, Mr. Nelson had chosen to tell us more about what we did not do effectively and to suggest the ways in which our efforts might be improved in the unhappy event that we need to draw upon these experiences in the future. The reader may find it difficult not to share the feeling revealed by the comment of one who was with the Board in its most trying days: "This is a very interesting volume; but I would like to see the book Mr. Nelson didn't write."

Although the work has limited significance for the professional economist in a technical sense, he will find it of much more than passing interest as a broad description of the attitudes and achievements of the man who filled the difficult post of chairman of the War Production Board throughout most of the war.

Vincent M. Barnett, Jr.

Williams College

Industrial Organization; Price and Production Policies; Business Methods

Small and Big Business, Economic Problems of the Size of Firms. By Joseph Steindl. (Oxford: Basil Blackwell. 1945. Pp. 66. 7*s*. 6*d*.; paper, 5*s*.)

This is the first of a new and promising series of monographs to be issued

from time to time by the Oxford University Institute of Statistics. The purpose of the series is to serve "as an outlet for research results too long for journals but too short to form a complete book."

The general economic problem with which this monograph is concerned is well summarized by Mr. Steindl as follows: "The protagonists of small business say: Big enterprises have a monopoly position, and they use it, and get their advantage from it; they care little about efficiency. Whereas the defenders of large business say: Small business is technically backward, and unable to use modern methods of large-scale production; only large concerns can produce efficiently" (p. 65).

Although Mr. Steindl recognizes that the two statements "are not necessarily contradictory," he is inclined toward the latter point of view, with the important added qualification that in his opinion large enterprises will tend to follow monopolistic and oligopolistic price policies and that, "The only effective attack on monopolies is that which through the control of prices and profit margins leads to nationalization" (p. 66).

Mr. Steindl begins his work with a refutation of Marshall's theory as it relates to size and efficiency. Marshall had held that large-scale economies would not lead to monopoly principally because of (1) the so-called "decay of entrepreneurial facilities" and (2) the difficulty which big firms experience in enlarging their market. Mr. Steindl summarizes his refutation by stating that Marshall "greatly over-estimated the importance of personal ability of the entrepreneur; and he gave a completely unrealistic picture of the ease and readiness with which big entrepreneurs, possessed of large capital, appear fresh on the scene, having grown up out of the realm of minor capitalists" (p. 4).

In support of his contention that "the advantages which big firms enjoy are in the last resort based on technical considerations," (*i.e.*, a greater efficiency) he advances a number of arguments, the most important of which are summarized below.

First, he calls attention to the fact that big firms can take advantage of any economies open to small plants, whereas small firms cannot introduce those open only to big plants. Second, he presents the principles originally set forth by Professor Sargent Florence[1] as responsible for the existence of large scale economies: "The principles of bulk transactions, of massed reserves, and of multiples." Third, he points out that scientific industrial research is essential for success in a modern competitive economy and that only the large firms can afford to support such research. And fourth, he cites the difficulties which small business experiences in obtaining finances and their relatively high cost as compared with funds obtained by large business.

In addition to presenting these logical arguments, he cites from American sources two different types of data—unit labor cost figures by size of plant and profit ratios by size of corporation. The unit cost data tend to decline with an increase in plant size, while the profit ratios, taken from Crum, tend to rise with an increase in corporate size.

All of this would appear to add up to a very conclusive case in favor of

[1] P. Sargent Florence, *The Logic of Industrial Organization* (London, 1933).

large enterprises, especially since there is a great deal more to the work than can be summarized in the space of a short review.

Actually, however, the case is by no means conclusive. In fact, a fairly good case for the opposite point of view can be made which would run somewhat as follows:

(1) The available evidence on unit costs by size of plant is confined to only a few industries and is, at best, fragmentary.

(2) But even if large plants do have the lowest costs, it does not follow that they are necessarily owned by the large concerns, to say nothing of the giant parent corporations. Steindl, in common with most writers on this subject, passes over the hiatus between plants on the one hand and concerns and corporations on the other with the greatest of ease. Actually, there is reason to believe that in many industries the most efficient plants are owned by relatively small or medium-sized concerns which are well below the size of the giant corporations in their industry.

(3) In regard to profit data, J. L. McConnell[2] has shown, as Mr. Steindl properly notes, that when compensation of officers is included in profits, the profit rate declines rather than rises with increasing size of corporation. Since only a part of officers' compensation should be regarded as profit, McConnell attempted to make a proper allocation of officers' compensation between profit and the "market value" of the officers' services. This analysis indicated that in normal times the profit rate is not higher in the larger corporations. Steindl recognizes this new and interesting contribution but objects to McConnell's methodology. Although McConnell's procedure is indeed subject to a number of technical criticisms—only one of which is mentioned by Steindl— it must be recognized that some part of officers' compensation in small corporations represents profit and that its inclusion in profits reduces, if not entirely eliminates the higher profit rate shown for the larger corporations. Moreover, the mere fact that in many concentrated industries small firms are often reasonably profitable—though perhaps less so than large ones—constitutes a striking testament of the efficiency of small concerns when it is considered that they must often compete with large corporations enjoying important monopolistic advantages.

(4) The problems of bureaucracy, red tape, inertia, and inflexibility are certainly greater in the large than in the small firm. However, despite the recognized importance of these factors, Steindl casually dismisses them with the completely unsupported observation that they "seem to have only minor importance in practice" (p. 11).

(5) The two institutional gaps in the economy which Steindl correctly cites as serious handicaps to small firms—their difficulties in obtaining financial aid and in conducting industrial research—are readily susceptible of correction by appropriate government action.

Enough has been said to indicate that a strong case can certainly be developed in opposition to the position which Steindl has chosen to maintain. But the plain fact of the matter is that any case on either side of this issue will necessarily be a weak case because of the paucity of published relevant

[2] *Survey of Current Business*, May, 1945.

statistical data. Like the elasticity of demand, the question of size and efficiency is one of those "great unknowns" in the field of economics.

But it need no longer remain an "unknown." In the files of the OPA are sufficient unit cost data to answer once and for all the question of the relationship between size and efficiency. These data need only to be organized and analyzed, a task which can be accomplished at very small cost. It would be a tragedy, indeed, if the government failed to salvage these invaluable records and organize them in such a way as to shed light on this and other basic economic problems.

Regardless, however, of what future analyses may reveal, Mr. Steindl's work is to be regarded as a well-organized and generally excellent presentation of the case that efficiency is on the side of bigness. But this reviewer, for one, is of the opinion that the OPA data, if and when analyzed, will reveal, at the least, numerous and significant exceptions to this general conclusion.

JOHN M. BLAIR

Washington D. C.

Marketing; Domestic Trade

Principles of Marketing. By HAROLD H. MAYNARD and THEODORE N. BECKMAN. 4th ed. (New York: Ronald. 1946. Pp. xiv, 736.)

This is the fourth edition of a fine textbook by the marketing experts of the Ohio State University. The original text included Professor Walter C. Weidler, now Dean of the School of Commerce and Administration of the Ohio State University, as a member of the marketing trio, and was published in 1927.[1] The book was revised in 1932[2] and in 1939.[3] The need for another revision—if indeed there be a need, other than the obvious and welcome pressure of a publisher, who never fails to hold a moistened finger to the trade wind—according to the authors, is not unlike the former one: marketing marches on; important changes have taken place; "significant" legislation has been enacted; "factual information" has increased, through the second decennial Census of Business and through market research. The authors have added another reason: "All economic activity, including marketing, has been subjected to severe strains and stresses," in part the result of World War II, with its accompanying controls and experimentation. "To reflect all of these in a significant measure is the main purpose of this revision" (p. v).

In all fairness, it must be admitted, the authors have not disappointed the reviewer's expectations. They have placed greater emphasis on fundamental principles without neglecting the factual material that is essential to a knowledge of the subject. Considerable new information has been added and made available by the four Censuses of Business for the years 1929, 1933, 1935, and 1939—the fourth being the second regular decennial Census of Distribution that was taken in 1940 for the year 1939. The subject matter

[1] Review in *Am. Econ. Rev.*, June, 1928, pp. 303–305.

[2] Review in *Amer. Econ. Rev.*, Sept., 1932, p. 506.

[3] Review in *Am. Econ. Rev.*, Sept., 1939, pp. 601–602.

has been reorganized into seven parts and thirty-nine chapters. The addition of questions and problems at the end of each chapter as a pedagogical help is a welcome feature of the text and will no doubt be of great assistance to teachers who use the book. And the functional method of approach in large measure has been retained.

Certain new material readily catches the eye. Deserving of special attention are the new or completely rewritten chapters dealing with the consumer in our marketing system, the wholesale structure, market efficiency, and also the new treatment accorded price policies. Other chapters have been improved by reworking them. Following in the footsteps of such writers as Copeland, Hoyt,[4] Phillips,[5] Gordon and others, the authors have given greater emphasis to the place of the consumer in the marketing process, "since every student is a consumer and thus finds it logical . . . to proceed from the known to the unknown." This is an acceptable point of view.

The method of approach that is employed by the authors would appear to determine, to some extent at least, the reorganization of the subject matter of the book. "In this book," they write on pages 16–17, "emphasis is placed on the functions of marketing. . . . But in order to understand the functioning of the marketing mechanism, one must of necessity first familiarize himself with the structural elements of the field, hence consideration is given to the marketing institutions before any elaborate discussion of functions is attempted. To lend even more concreteness than is presented in the illustrative material, the marketing of a selected number of commodities is also presented. All of this is supplemented by historical material and cost data. In a word, while the functional treatment is given major consideration, the other methods of approach cannot be overlooked; all of them must be woven into a pattern that reflects realistically our marketing system, with its functioning or life standing out in bold relief." This is a high aim and is deserving of high praise even to attempt such an effort.

The arrangement of the book follows this methodology. Part I treats of some marketing fundamentals (two chapters). Part II deals with the ultimate consumer (three chapters). Part III explains the retailing system (seven chapters), and Part IV the wholesale system (nine chapters). Part V describes the various marketing functions (nine chapters) and Part VI price policies (five chapters). Part VII concludes with a discussion of marketing costs, marketing efficiency, and the relation of the government to marketing (four chapters). This order of treatment of the subject would seem to be well suited to the purpose that the authors have in mind.

Perhaps one final comment might be warranted with regard to the point of view. After discussing the conflicting interests of producers, consumers, and middlemen, the authors add: "It is obvious, then, that to be scientific and consequently impartial, the student of marketing must, in a consideration of every marketing problem, treat fairly all interests involved, with his major interest, of course, on the social rather than the individual point of view, with a strong leaning toward the consumer's interests" (p. 19). This

[4] Review in *Am. Econ. Rev.*, Sept., 1929, pp. 513–15.

[5] Review in *Am. Econ. Rev.*, Mar., 1939, pp. 152–53.

may seem to some a counsel of perfection. Simpler far to adopt admittedly either the social or the individual point of view—and may Clio be gracious!

Truly the book has merit. The revision is a decided improvement over previous editions; it is not cluttered up with unnecessary technical débris but has sufficient graphs and tables to satisfy the devotee of blackboard and chalk; and it is teachable and informative. Like most marketing textbooks, it is short on cost data and long on prophecy that marketing efficiency will be enhanced when we have more adequate cost material and when it has been subjected to more thorough analysis (p. 669). And to this desideratum we all say in unison: so mote it be!

JESSE S. ROBINSON

Carleton College

Economic Geography; Regional Planning; Urban Land; Housing

All These People: The Nation's Human Resources in the South. By RUPERT B. VANCE. (Chapel Hill: Univ. of North Carolina Press. 1945. Pp. xxxiii, 503. $5.00.)

This treatise is a versatile and encyclopedic analysis of the people of the South. Revealing as to its basic thesis and underlying premise is the reasoning of the author in selecting the title and subtitle. The title *All These People* was suggested by the fundamental importance in this work of the fact that Southerners are reproducing themselves faster than any other regional segment of the national population. The subtitle resulted from another important and minutely-explored fact considered in conjunction with the attitude taken toward it. This point, "that Southerners have less on which to live," was viewed with tranquillity rather than alarm by the author because he believes that these people are needed by the region and the nation. Consequently, the subtitle, *The Nation's Human Resources in the South.* Along this line of thought is the oft-repeated message of the author expressed in factual material, in value judgment and in suggested policy that the contribution of these people to the nation's welfare may be immeasurably enhanced by the further development of their capacities and potentialities.

Five broad sections comprise *All These People.* Although the entire work may be broadly characterized as a population study, the first section or Part I, entitled "The Dynamics of Population," is devoted exclusively to the analysis of population within the more or less conventional demographic framework. Starting with a brief first-chapter discussion of assumptions and social values involved, Vance proceeds with the systematic consideration of factual population data as the following chapter headings indicate (in an instance or two, not too clearly): "How the People Grew," "The Record of the Decade," "Male and Female," "The Young, the Old and the Mature," "The Trend of Fertility," "Family Size and Replacements," "The Pattern of High Fertility," "Moving Across the Map," "The Trend of

Southern Migration," and "The Changing Occupational Distribution." In the treatment of these topics and throughout the study, trends and relationships pertaining to the Southeast are placed in the proper perspective by the presentation of corresponding information for other regions and for the nation as a whole.

The economy of the South is dominated by agriculture. Its many-faceted configuration is inextricably bound up with and basic to the so-called population problem of the region. This connection led to the thorough investigation of "Population and the Agrarian Economy" in Part III. Attention is successively focused upon the rôle in the total population picture of land use, farm income, power resources, tenancy and the Negro in agriculture.

Part III treats the influence exerted by industry on the people of the South. Income, industry and unemployment are examined with the aim of discovering ways and means for the fuller utilization of material and human resources. Also included are appropriate case studies of the industrialization of rural areas in the Southern Piedmont and its consequences. Although not an all-out irrepressible exponent of complete industrialization now as a cure-all for the region's ills, Vance does conclude that "With the country's agricultural needs already well supplied, the South's insistent cry for a higher standard of living can be answered only by an expanding industrial production in which the workers take part" (p. 317).

In Part IV, termed "The Cultural Adequacy of the People," the author rounds out his factual analysis by delving into other factors vital to the cultural and economic development of the South. In this connection health is the center of attention in three chapters, education in five and leadership in one.

The first four parts are crowded with empirical data. After giving this imposing and well-balanced factual background, the writer moves on in the concluding section, Part V, to the philosophical question of social policy. Basic issues are raised with respect to the formulation of public policy in two fields for which no policy has been charted: (1) regional-national population and (2) regional-national development. Vance's guiding principle in this elusive and intangible area is indicated by the following quotation, "Certainly there can be no better touchstone for our national policy than this question: Is it conducive to the conservation and development of our total human resources?"

This work is both a down-to-earth fact-finding study and a theoretical treatment of ultimate values and societal goals. Fact and theory are conveniently arranged in such a manner that one may be gleaned without interference from the other if such be the desire of the reader. The philosophical considerations are limited to the first and the two concluding chapters while the factual material is dealt with in the intervening twenty-nine chapters. In the presentation of the detailed data, extensive use is made of the graphic and tabular methods. Included in the entire book are 281 figures and 146 tables which combined represent a vast storehouse of readily available social and economic data on the human resources of the South. Sources of all material utilized are specified by meticulous documentation.

In the general pattern of previous scholarly and worthwhile studies in regionalism from the University of North Carolina, *All These People* is undoubtedly the most notable of the lot. Its extreme breadth of scope precluded the depth of analysis that may be desired by some subject matter specialists in their particular academic preserves. But because of this extensive coverage, buttressed by the tremendous accumulation of factual data, this volume will establish itself rapidly as a source book on the people of the South. Of primary interest to the demographer and other sociologists, it will hardly be less in demand by economists, political scientists, educators, health specialists, and students of agriculture.

HOMER L. HITT

Louisiana State University

Labor and Industrial Relations

A Labor Policy for America: A National Labor Code. By LUDWIG TELLER. Foreword by Senator Wayne Morse. (New York: Baker, Voorhis. 1945. Pp. xx, 334. $3.75.)

Mr. Teller's book should call for a commission, to canvass proposals and to make recommendations. What its highly competent author thinks it calls for, however, is a statute, a new law which he has painstakingly worked out to improve and codify the crazy-quilt of federal laws about labor relations. Doubts concerning particular proposals leave one admiring still the grasp and power to analyze chaos which Mr. Teller's work exhibits. This should not be surprising from the author of *Labor Disputes and Collective Bargaining.*

Mr. Teller's attack is unique, so far as this reviewer is aware. Professor Gregory's *Labor and the Law* (Norton, 1946) has some similarity, but does not propose such a detailed or sweeping scheme of reform. Mr. Metz's *Labor Policy of the Federal Government* (Brookings Institute, 1945) bears a superficial resemblance; but differs in that it is a study of what exists whereas Mr. Teller's book is mainly a proposal of what ought to exist.

It is not with an intent to belittle Mr. Teller's effort that the suggestion is made that it calls for a commission but not for a statute. It is barely possible that Mr. Teller has all the right answers. He makes a cogent case for each, within the limited space he allows himself for so gigantic a subject. Certainly his "Code" would bring some advantages to labor, and to management, and to the public. But such proposals should never be adopted out of hand. They might well be studied with other recent proposals, by a Presidential commission. Such commissions have made significant contributions to legislative decisions in the past. Legislative decisions of vast importance spurred by the recent elections, may soon be in the making.

The book is divided into two parts, the first introductory and the second propounding the "Code." In the first, the principal trends in the development of our labor law are traced, and the reasons surveyed for the sorry figure generally cut by the courts in this particular field. Administrative

procedures under the Railway Labor act, the National Industrial Recovery act, the Wagner act and such wage-hour statutes as the Davis-Bacon, Walsh-Healey and Fair Labor Standards acts, are briefly reviewed. So also are recent proposals for administrative reform, such as the vetoed Logan-Walter bill, the Attorney General's Committee report and the New York Benjamin report. These last supply many of the proposals later embodied in the Code. On the substantive side, there are discussed the reports of the President's commission upon British and Swedish experience with labor and collective bargaining; the report on internal affairs of labor unions made by the American Civil Liberties Union; and the "Smith Amendments" and other labor legislation, enacted and proposed. Surprisingly no mention is made of the Ball-Burton-Hatch or the Case bill. Other items—the act aimed at "feather-bedding" abuses in broadcasting, the President's proposed legislation to end the railway strike by conscripting workers, and the anti-racketeering fragment of the vetoed Case bill which did become law—are too recent for discussion in this book; as is also the new federal act relating to administrative procedure.

In Part 2, the Labor Code is sketched, not in exact statutory language but in the form of general statements from which its text would be constructed. After a repudiation of fashionable methods of solving labor problems by deduction from such concepts as private property and contract rights on the one hand or inequality in bargaining power on the other, Mr. Teller sets up three "propositions" and ten "policies" as preferable guides; then makes the many concrete proposals which seem to him to follow from his almost unexceptionable generalities:

First, a series of unfair labor practices by employees would be enunciated to counterbalance practices forbidden to companies by the Wagner act. Disorderly conduct, mass picketing, sit-down or malicious slow-down strikes, fraudulent conduct, and the picketing of homes would all come under the ban. A "Labor Court," enlarged successor to the present National Labor Relations Board, would be established and, like the present Board, it would be empowered to make cease-and-desist orders and to direct affirmative action, to stop unfair labor practices. Court decrees would enforce such orders, and violations would constitute contempts of court (except where the order calls for a money payment).

Inasmuch as any individual would be granted a (quite new) power to institute and prosecute his own case, Mr. Teller would bring back, in the guise of cease-and-desist orders, some of the substance of the labor injunction. This has been almost banned by the Norris-LaGuardia act and numerous State statutes. In each type of employees' offense, the end result of a successful company's litigation would be an injunction, enforceable by contempt. The evils of "government by injunction" would doubtless be mitigated, in that an expert Labor Court or its hearing officer would make the initial decisions. For the particular unfair practices we are now talking about, this might be a sufficient answer (provided it seems wise to grant jurisdiction over disorderly strikers to a federal agency). But on the more general question, those who believe that the evils of the labor injunction

outweigh its advantages will need more than is in this book to be convinced. The fundamental difficulty is, not the lack of serious abuses which cry to be prevented, but a doubt that injunctions are an effective method of winning human coöperation. They have undoubtedly broken some strikes which ought to have been broken. But particular instances can hardly be conclusive on broad questions of social policy. Remedies which revolt and embitter large segments of the population may create more strife than they prevent.

Creation of unfair labor practices by employees reopens another controversial issue, and here again, in the reviewer's opinion, Mr. Teller fails to meet the burden of proof. The suggestion that the Wagner act ought not be a one-sided law, favoring labor alone, was urged before that act was ever passed. The answer that prevailed was, again, not that abuses and injustices were not present, but that the act was aimed against one great wrong: the abuse by business of its economic strength in fighting unions and persecuting union leaders. The act was not intended as a panacea. Mr. Teller answers that we are ready for the panacea now. His argument that the federal government should thus expand its administrative controls can hardly be accepted before one has digested the opinions of many spokesmen for management, labor and government. Members of the National Labor Relations Board, for example, and of the National War Labor Board, who have lived day and night with these problems, should undoubtedly be heard.

Doubt grows into skepticism on the next proposal, making it an enjoinable practice for workers to interfere, by contract, strike or other concerted activity, with the introduction or use of mechanical devices. The only exceptions permissible would be demands for severance pay for workers who might be discharged, and for better incentive wages for workers who remain. This seems a cavalier disposal of the intricate problem of man against machine. Granting the general social interest in the "highest degree of production" and "technological advancement," are we to assume that every proposal of a more efficient process presents so clear a social gain that a worker should be forbidden by law to strike in defense of his job? The generalities of the Green-Murray-Johnston Labor-Management Charter of March 28, 1945 (which Mr. Teller prints as an appendix, and relies upon here), are hardly sufficient to require this result under all of the complexities of circumstance in which technological unemployment can arise.

The jurisdictional dispute, after one union has become a statutory representative, is another labor activity which Mr. Teller would ban by law and subject to the labor injunction. (To lessen union-perpetuities, however, any collective contract of more than two years would be made itself an unfair labor practice.) The obvious injustices to management, which result from disputes that management is powerless to settle, are made a road to the conclusion that if labor does not settle these disputes government must. Our immature labor organization has made the jurisdictional dispute one of our most bitter and disastrous types of labor pain. But the experience of the National War Labor Board with jurisdictional strikes did not encourage belief in the efficacy of settling them by compulsion, even during war when

motives of patriotism were felt, and urgent pressures of public opinion. Mr. Teller would now, in peacetime, enjoin all activity in support of such a jurisdictional fight.

He would also prohibit a company from bargaining with any union not certified by the Labor Court, whether a rival union is in the field or not. Certification would come only after a searching inquiry into the democratic character of the union and its willingness and ability to represent all the workers in the unit. If Mr. Teller were not slightly intoxicated by the beauty of the systematic plan he has designed, one so experienced as he in practical labor relations might himself be skeptical of this effort to produce utopia by fiat.

A certification once made would be revocable at any time, on proof of facts which would have defeated certification in the first instance. Every certification would be coupled automatically with an order that the company bargain at once with the union certified; and this order could be appealed at once by any interested party. This would eliminate much delay and injustice in the present system which permits no appeal until, and unless, the company refuses to bargain. It would not allow the dilatory appeals from certification which it was the intent of the Wagner act to avoid.

On another "hot" issue, that of union security, which broke the National Defense Mediation Board, Mr. Teller would draw the line of legality between the closed shop, which requires hiring through a labor union and thus smacks of monopoly, and the union shop which merely requires that workers join the union after the employer has hired them. The proposed distinction is an interesting one, but one questions whether it gives enough weight to the fact that there are good closed shops as well as bad.

All concerted labor activity would be prohibited if it brings pressure against any third person not having a "beneficial economic relationship" with the company; or against one having such a relationship if he has bought goods from the company or made a contract with it without knowledge of the controversy; or if it brings pressure to compel the doing of any act which is illegal; *or if it seeks any other result which the Labor Court may find to be an unlawful labor objective.* Let us note what this would mean. Prohibition of an act by any local law, however arbitrary, would require the federal government to help enforce that law by preventing union efforts to induce that act. And a federal agency, *quite independent of the Congress, would have an almost plenary power to declare a labor objective illegal.* (Court review could not be expected to reverse such a decision unless it were arbitrary.) For this tremendous grant of power the excuse advanced is that the Board acts now against any company practice which it finds to be an illegal interference with freedom to organize and bargain collectively. But Mr. Teller's proposal is of an utterly different order. It would create no such standard. If a particular motive should not seem socially desirable to a majority of the Labor Court, no union engaging in interstate commerce might work for it legally. The union's members might not legally stop work, in concert, to obtain it.

Discrimination by a union against members or persons desiring member-

ship, on account of their race, color or opinions, would be made an unfair labor practice, and fair hearings and appeals in such cases would be required. This follows substantially the "bill of rights" proposed in 1943 by the American Civil Liberties Union after an extensive investigation of undemocratic practices in trade unions. Some government regulation does seem desirable here, and fully justifiable in view of the quasi-legislative powers delegated by the Wagner act. (The act makes a designated union the statutory representative, not of the union's members only, but of each and every worker in the unit, whether he wishes to have the union represent him or not.) But the methods of any such regulation need careful consideration so as not to give chances for dilatory litigation to anti-union employers.

Present provisions on unfair labor practices by management would be retained, though with some modifications of Section 8 of the Wagner act, mainly to fit it to other provisions of the Code. An employer is also to be forbidden, with two minor exceptions, from discriminating among workers because of their race, color or opinions, thus constituting the Labor Court a permanent Fair Employment Practices Commission. It would be an unfair labor practice, further, for a company to discharge a worker at the demand of a union, pursuant to a contract provision for union security, unless the union certifies that the worker has finally exhausted his remedies within the union.

Either company or union would be guilty of an unfair labor practice for violating any collective-bargaining agreement or arbitrator's award. Industry-wide collective bargaining would be encouraged, but this would become an unfair labor practice if used as a cloak for such monopolistic practices as fixing prices, allocating markets, or limiting the amount of production or the number of producers.

The Fair Labor Standards act and all other federal wage and hour and child-labor, etc., statutes are to be incorporated in the Code, with improvements and integration to make coverage more uniform, and to place administration and enforcement in the hands of the expert Labor Court, subject to review by the courts.

The Labor Court would be the administrative agency charged with enforcing all rights under the Code, but any individual or company would have power to prosecute its own cause. The Labor Court would also be empowered to bring proceedings where important public interests are involved. A two-year statute of limitations, for the private litigant at least, would limit the time within which action might be commenced.

Decisions by the Labor Court's trial examiners would become orders at once, unless stayed on appeal to the Labor Court or to a Circuit Court of Appeals. As recommended by the Attorney General's Committee on Administrative Procedure in 1941, the trial examiners—who now make mere recommendations, on each of which the Board must act—would become hearing commissioners with fixed tenure of office. Other segregated divisions within the Labor Court would also be established, to perform its duties of investigation, adjustment, review, enforcement, etc. This segregation is also in harmony with recommendations of the Attorney General's Committee,

as are many other detailed proposals for administrative reform. In one respect Mr. Teller goes beyond the Committee's proposals: by constituting trial examiners' decisions immediate orders of a Circuit Court of Appeals, unless of course in the case of a stay. This radical innovation is designed to make such decisions enforceable at once, as even a Board order is not, and thus to avoid delay. It may seem startling, but it has a good deal to commend it and should create no danger of prejudice if sufficiently liberal provisions for appeal and stay shall safeguard all possible parties in interest.

The Labor Court would be wholly independent of the Department of Labor, which would continue its vital tasks of conciliation and the encouragement of voluntary arbitration, as well as the invaluable intelligence work of its Bureau of Labor Statistics.

Under the Code, the Labor Court would enforce arbitrators' awards; and it would likewise enforce awards of the National Railroad Adjustment Board. It would also protect the railroad unions from employer interference. The other functions of the National Mediation Board, consisting of the conciliation of rail disputes, would be incorporated into the Department of Labor.

Special legislation should, Mr. Teller thinks, be considered for government workers, possibly making any concerted activities by them, except organizing and presentation of grievances, into unfair labor practices subject to orders to cease and desist. Other special problems may also arise where public health and safety demand drastic limitation of the right to strike. But this Mr. Teller believes still to be a matter for future experience to determine. In the absence of such experience and convincing proof of such necessity in the particular case, he opposes any form of compulsory arbitration of disputes over wages, hours and conditions of employment. It has worked well nowhere. He even condemns such expedients as "cooling off" periods and fact-finding bodies, especially those which are instructed to assess blame. He doubts the wisdom of creating a new national board for mediating disputes. Free collective bargaining, without too much government coddling, he sees as the most hopeful road toward the end of our troubles.

The final estimate of Mr. Teller's book must depend on the reader's fundamental attitude toward our turbulent workers. Leaving extremists aside, we may note two rather clearly marked bands in the spectrum of opinion which will yield different results.

Some see progress largely in the terms of bringing more and more of humanity's quarrels from the jungle of violence into the realm of law. The anarchy of labor relations, like the anarchy of foreign relations, is a reproach and a threat to the claims of civilization. The public welfare cannot tolerate continued war between employee and employer which menaces the entire economy. Such views must be strong in Mr. Teller—as indeed they are in all of us. They motivate many of his proposals. To those of us who think this way—or when we think this way—Mr. Teller's book is a constructive analysis and often an extremely brilliant one.

But logically such views point to compulsory arbitration and denial of

the right to strike. Mr. Teller repudiates both conclusions. His work thus suffers from an unresolved conflict between his recognition of the right to strike, picket and boycott in the abstract, and his denial of those rights whenever their objectives fail to meet his tests of the socially desirable. His answer of course is that no right, however sacred, is an absolute; and that where he proposes to curb the right, the objective is one which all fair-minded men would agree to be antisocial.

Others look upon the law—yes, as a balancing of social interests—but as a balance not to be struck until a majority of those affected can more or less agree on what the law ought to be. These see our society, born of a Revolution proclaiming opportunity for all, as an economy wherein the ordinary worker has never come to have much chance of a decent living. They are impressed by the figures on increasing concentration of corporate wealth, and by the relation of the annual wage of most workers to the minimum subsistence family budget. But they see the rise of unionism in the past century as some slight evidence that the ideals of 1776 are still working in this new, industrialized society. They do not blink the evils, the monopolies, racketeering, "feather-bedding" and other injustices, the human and economic wastage of strikes. But they believe that in this most rapidly changing period of human history, the desperate chance of avoiding more war and revolution may depend on the degree to which organized labor can use its economic power to counterweigh the ever-growing economic power of business. The fact that the many are gaining a measure of economic strength is of more importance, for the purposes of democracy, than the fact that the many may make mistakes. Management makes its antisocial mistakes, too; and its objectives are subject to no effective control in the social interest. To such observers, many of Mr. Teller's proposals will seem doubtful wisdom, as an effort to write the law in terms of social interests before one can be certain what the social interests actually are.

BERTRAM WILLCOX

Cornell University

Collective Wage Determination: Problems and Principles in Bargaining, Arbitration, and Legislation. By Z. CLARK DICKINSON. (New York: Ronald Press. 1941. Pp. xviii, 640. $5.00.)

It is instructive in these days of controversy over wage rates to turn to Professor Dickinson's comprehensive survey of the issues and problems of collective wage determination. After a brief examination of the labor market, Part II of the book starts with a survey of the economic theory of wages (Chap. 4). The central portion of the book then treats the "several families of arguments commonly evoked in wage deliberations": the cost of living (Chap. 5), the relation to total production costs (Chap. 7), production and productivity (Chap. 8), wage-paying capacity (Chap. 9), comparison with other wages (Chap. 10), and the influence of unemployment on wage determination (Part III, Chaps. 11–13). The author examines in Part IV (Chaps. 14–16) the wage policies and practices in private collective bargain-

ing and turns finally in Part V (Chaps. 12–21) to the influence of public policy on wages.

The author of ***Compensating Industrial Effort*** wisely warns that it is easily possible " . . . to exaggerate the role played by wages in labor problems" (p. 3). The emphasis upon the substitution in bargaining between any condition of employment (union security, lay-off policy, etc.) and wages is essential to the understanding of any collective wage determination (p. 25). Yet the reading of this book constitutes an antidote to the extreme generalization of a writer like Peter F. Drucker who has recently insisted that " . . . wage rates are rarely an important cause of labor trouble in American industry, except in a few areas of substandard wages . . . ."[1] The extension of the experience with individual workers in the small work community to the conflict over wage rates between large labor organizations and corporations is unwarranted.

A survey of economic thinking on wage determination must face up to the question whether there exists a "theory of wages" under collective bargaining in the sense of explaining the level of wage rates. Marginal productivity constitutes the demand for labor services; it indicates the amount of services which will be hired at varying prices (wage rates). However, the customary supply curve of labor can have little meaning under conditions of mass unionization. The amount of labor services which the union allows to be sold is not a unique function of the wage rate. Consequently, wage rates cannot be said to be determined in any precise sense by supply and demand. There is really no "marginal productivity theory of wages"; marginal productivity can only indicate the demand schedule. Here is a fundamental problem which Professor Dickinson has not faced in his chapter on the economic theory of wages (Chap. 4).

One of the most useful features of the book is the discussion in Chapters 5–10 of the arguments and points of view frequently presented in wage negotiations, in arbitration proceedings, and in government wage fixing. Professor Dickinson has surveyed many of the problems of measurement involved in an appeal to these wage standards. The rich use of illustrative material will prove useful to students without being tedious. In the course of these chapters Professor Dickinson has wisely aided pedagogy by raising as many questions as he answers.

The discussion in Part V of the influence of public policy on wage rates is instructive, although the date of publication precludes the greater part of the recent wartime experience. Public policy may affect wage rates by minimum wage laws, by determining the wages of government employees, through specifying wage levels in contracts let by government agencies, through a family allowance system, and by any governmental disputes settling machinery. The treatment of the experience in foreign countries is a useful summary.

The chapter on the labor market and the wage-hour structure at the outset of the volume reveals how little work has been done to summarize char-

[1] "Why Men Strike," *Harper's*, November, 1946, p. 386. The first part of the quotation is in italics in the original.

acteristics of the wage structure and its movement over time. Have differentials among industries, among regions, and among job classifications increased or decreased? How have wages moved in expanding as compared to contracting industries? (The treatment of the problem of these secular changes in employment on wages in Chapter 12 is one of the best in the book.) How have hourly earnings varied in comparison to wage rate structures?

There must be reservations concerning the treatment of the problem of the relation of wage rates to employment in Chapter 13. The Keynesian position has not been well stated. Neither is there a discussion of cyclical rigidities which is aware of the type of analysis presented by Professor Hicks in *Value and Capital*. One might have wished for a sharper separation of problems of wage movements for the total system from particular equilibrium changes. But the book is thoroughly useful as textbook or reference. It is especially commendable to the ordinary student for bridging the gap between abstract analysis and wage-setting practices and arguments.

JOHN T. DUNLOP

Harvard University

Population; Migration; Vital Statistics

Population and Peace in the Pacific. By WARREN S. THOMPSON. (Chicago: Univ. of Chicago Press. 1946. Pp. 397. $3.75.)

In 1929 Warren S. Thompson published a book, *Danger Spots in World Population*, in which he drew attention to the dangers to peace resulting from unequal population growth and pressure on resources in various parts of the world. The present study by the director of the Scripps Foundation is a vigorous restatement and elaboration of this thesis with particular reference to the Pacific.

As is well known, the cycle of population growth, familiar in the West, is now operative in the Far East in its early, expansionist phase. In Japan, India and Southeast Asia and potentially in China, the introduction of internal order, modern transport, sanitation, and agricultural and industrial expansion have brought about a fall in the death rate. Meanwhile birth rates remain high, responding slowly if at all (except in Japan) to modernization.

In a country by country analysis, Professor Thompson examines the prospects throughout the area. He concludes that the widening gap between birth and death rates, appearing in Far Eastern countries already possessing immense populations, threatens to produce a prodigious increase in numbers absorbing most of the expected gains in national income in the calculable future. With new land strictly limited, with intractable obstacles to rapid agricultural improvement and industrial growth, the chances are that population pressure will be maintained or even increased for some decades, with little improvement in human well-being.

In this situation, the author believes, are to be found the seeds of future

wars between the East and West. For Asiatic peoples, with rising felt needs, are likely to develop a growing sense of injustice over the unequal distribution of world resources. Particularly will they cast covetous eyes at certain rich, undeveloped areas in the Western Pacific and Africa now controlled by "stationary" European peoples and barred to Asiatic migration and exploitation. China and India at least, and perhaps Japan again, will acquire the military strength in time to make their demands effective. In this looming struggle, prophesies the author, the Western European peoples are going to be "on the losing side of power arguments" —"the high birth rate peoples will win." It is therefore only prudent to make concessions while there is yet time, and to work for an international authority and program to harmonize conflicting national needs.

Most urgent is the issue of colonial control in the Southwest Pacific, in Professor Thompson's opinion. In a highly critical review of the whole colonial system, he attacks with special vigor discriminatory restrictions on Asiatic migration and settlement. Admittedly, immigration by Indians and Chinese to Indonesia and Oceania would not relieve population pressure at home. The right, however, to do so on nondiscriminatory terms would at least appease a growing resentment over exclusion. Objections to "opening up" unused portions of the tropics, says the author, reflect mainly the selfish interests of the colonial powers, cloaked under pleas of native welfare. (The attitude of native peoples is not discussed.) This policy is morally indefensible and will become less and less tenable militarily as differential population increase shifts the balance of power to Asia.

Few people will question the magnitude of the problems presented by the unrestrained increase of the vast, poverty-ridden populations of the Far East. One doubts, however, that politico-economic relationships in this field are as simple as Professor Thompson supposes. The future may belong to the "swarming" peoples, but if so it will only be when and as population growth comes under control. A high birth rate in the already densely populated countries of Asia is not a factor of national strength but of weakness, for it perpetuates poverty, technical backwardness, illiteracy and civil disorder. Moreover, the impulse to aggression is not correlated necessarily with population increase or pressure—witness Germany and Japan. Japan's militarism predates her modernization. It became a world menace only as she began to bring her population under control, to raise *per capita* income by industrialization and foreign trade, and thereby to increase her military ascendancy over her Asiatic neighbors.

Professor Thompson's projections of expanding populations at the subsistence line suggest that the danger lies less in some formidable onslaught against the West by a resentful "have-not" East than in the continuation here among half the world's population of grinding poverty, disease, and unrest, which is likely to impose a continual drag on all efforts to foster world security and economic development.

As for the proposal to open the islands of the Southwest Pacific to Asiatic migration, one wishes the author had examined more in detail the possibilities and attendant problems in specific areas. In a secure world there would

be no justification for discrimination by the colonial powers against Asiatics and in favor of Europeans, in areas capable of supporting closer settlement. It is fair to point out, however, that turning over New Guinea to Japanese development, as Professor Thompson proposed some years ago in *Danger Spots in World Population*, would only have afforded Japan additional bases for penetration and conquest. It could hardly have persuaded her from the path of aggression.

So far as Chinese or Indian immigration in the future is concerned, it would appear that the trusteeship principle in colonial areas implies close (though not discriminatory) restriction of land settlement by immigrant peoples. Except in New Guinea and perhaps parts of Borneo, local resources are required for the future use of native peoples. Moreover, the introduction of diverse racial groups in itself brings difficult problems of race relations for immigrant peoples, as in Burma and Malaya today. Chinese and Indian leaders themselves are in fact more concerned with the broader issue as to how the developed resources of the West are to be employed to assist in coping with their staggering problem of population and poverty at home, for which emigration offers no solution.

This economic problem is of varying degrees of urgency in different areas of East Asia. The bulk of Professor Thompson's book is devoted to a useful summary of available data for each country on population, resources, agricultural and industrial development. He shows that Japan alone in pre-war years made substantial progress towards the control of population and relief of poverty (though he exaggerates the rôle of her colonies in this regard). Her continued increase in numbers can only be cared for by a revival of her foreign trade, for which the author makes a strong but not very optimistic plea.

The most serious prospect is presented in India, where population increased 83 million from 1921 to 1941, and in China, where a large increase above the present 375–425 million may be expected once political security, efficient transport and the rudiments of sanitation and health control become general. In neither country, nor in the countries of Southeast Asia, is there evidence of any downward trend in fertility. The author doubts that either agricultural improvement or industrialization can be brought about rapidly enough to out-run latent population growth. A perpetuation of present poverty levels for increasing millions of people is therefore the likelihood throughout most of the Far East. Only in Southeast Asia can the urgency of the problem be relieved for a time by recourse to large amounts of new, unsettled land.

These are sweeping conclusions, to which anyone must accord a considerable degree of probability. One can only hope that on several grounds they may prove unduly pessimistic. It should be noted that Professor Thompson discusses the prospects for economic development largely in terms of domestic food supply and mineral resources. Comparatively little attention is paid to other types of industrial resources, or to the possibilities of international trade in relieving national deficiencies. Also, it may no longer be valid to project future rates of economic development on the basis of past

patterns of economic and political organization. Asiatic peoples may be prepared, for example, to accept sweeping state intervention and control as the price of rapid accumulation of industrial capital, agrarian reform, and technical advance. The "Bombay Plan" and other ambitious proposals put forward by responsible Indian and Chinese leaders are suggestive in this regard.

To raise living standards by this or any other method, however, requires that these Far Eastern countries somehow find the means to achieve internal political unity and effect the transition to national independence on terms which enable them to place economic welfare in the forefront of national objectives. And, as the author rightly emphasizes, even this will avail little unless birth rates are brought under control. One wonders if in fact deliberate encouragement of the small family pattern is as hopeless a task as it is usually assumed to be. Just what social and cultural values are involved, and how they might be altered, is a matter on which sociologists and demographers both in Far Eastern and Western countries might usefully coöperate. There are few issues of more critical import for the world's long-term future.

WILLIAM W. LOCKWOOD

Princeton University

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Editor's Note—The following list of important economic works published in the Netherlands or by Dutch authors during the war years is drawn from a fuller list for which the *Review* is indebted to Dr. P. J. Verdoorn of the Centraal Planbureau, The Hague.

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NOTES

The American Economic Association nominating committee for the current year consists of Professor I. L. Sharfman of the University of Michigan, Chairman, Professor Warren B. Catlin of Bowdoin College, Dr. Robert D. Calkins of the General Education Board, Miss Faith M. Williams of the United States Department of Labor, Dean Robert P. Brooks of the University of Georgia, and Professor R. S. Howey of the University of Kansas. It is requested that suggestions for nomination to the various offices of the Association be communicated to the chairman of this committee as speedily as possible.

The annual meetings of the American Economic Association will be held on December 27, 28, 29, and 30, 1947, in Chicago, at the Hotel Continental. The meetings will be centered on two main themes, namely, (1) the economic and monetary theories of J. M. Keynes and (2) competition, imperfect competition and monopoly. There will be incidental discussion of the production function. The meetings on the first day will be devoted to a theoretical consideration of these problems while the second day will concentrate on factual and statistical material bearing on mooted issues in these fields. On the final day, problems of public policy in each of these fields will be considered. Representatives of the main schools of thought will take part in the discussions and every effort will be made to effect a considerable degree of integration with the programs of the American Statistical Association and the Econometric Society. There will be two dinner meetings when a more general discussion of some of the issues will be staged. Facilities will be provided for the display of statistical material and models.

It is requested that those who wish to offer suggestions as to specific topics to be discussed communicate with the President of the Association, Paul H. Douglas, care of the Department of Economics, University of Chicago, Chicago 37, Illinois.

The following persons have recently become members of the AMERICAN ECONOMIC ASSOCIATION:

Adams, I. G., Faculty Exchange Box 263, College Station, Texas
Alford, J. S., 301 Waugh St., Columbia, Mo.
Alvarez, J., Santa Emilia No. 357, altos, Vibora, Havana, Cuba
Auxier, C. C., Box 5112, Duke Station, Durham, N.C.
Baker, Miss H., 120 Prospect St., Princeton, N.J.
Baker, H. P., 518 S. Williams St., Columbia, Mo.
Ballantine, R. W., Graduate College, Princeton, N.J.
Barnett, R. A., 419 N. State St., Apt. 5, Ann Arbor, Mich.
Beach, E. F., Arts Bldg., McGill University, Montreal, Canada
Beckerle, V. J., 3674 Lindell St., St. Louis, Mo.
Beimel, E., 393 Central Park W., New York 25, N. Y.
Bennett, A. S., 90 Broad St., Room 1519, New York 4, N.Y.
Berrettoni, J. N., School of Business, University of Minnesota, Minneapolis 14, Minn.
Bradley, C., University Club, 1206 Illinois St., Urbana, Ill.
Bradshaw, F. H., 403 N. Grove Ave., Oak Park, Ill.
Brault, F., St. Henry's Seminary, 5901 W. Main St., Belleville, Ill.
Briggs, H. S., 871–7th Ave., New York 19, N.Y.
Brill, J. E., 500 Builders Exchange, Minneapolis 2, Minn.
Brunner, E., Jr., 1724–17th St., N.W., Washington 9, D.C.
Bund, H., Research Institute of America, 292 Madison Ave., New York 17, N.Y.
Cabe, J. C., 211 Kinley Hall, University of Illinois, Urbana, Ill.
Callander, C. L., 904 Erie Ave., Takoma Park, Md.
Capron, W. M., 25 Avon St., Cambridge, Mass.

Cheley, W. F., Dept. of Economics, Lafayette College, Easton, Pa.
Cheng, W., 1414 E. 59th St., Chicago, Ill.
Colburn, L. D., 4219 Locust St., Kansas City 4, Mo.
Courtney, W. H., Los Angeles Chamber of Commerce, 1151 S. Broadway, Los Angeles 15, Calif.
Croteau, J. T., Xavier University, Dana Ave. and Victory Pkwy., Cincinnati, Ohio
Cunningham, H. M., 5223 Connecticut Ave., N.W., Washington, D.C.
Cushing, M. B., Bowdoin College, Brunswick, Me.
Davidson, S., Dept. of Economics, University of Michigan, Ann Arbor, Mich.
Davis, J., Trinity University, San Antonio 1, Texas
Deckinger, E. L., 405 W. 57th St., New York 19, N.Y.
Dessel, M. D., 4223 N. 2nd Road, Arlington, Va.
Deutch, J., 563 Powell St., Brooklyn 12, N.Y.
Dieckman, W. R., 1772 S. State St., Ann Arbor, Mich.
Dinwiddie, G. S., 1240 Canal Bldg., New Orleans, La.
Dishaw, I. H., 40 Divinity Hall, Harvard University, Cambridge 38, Mass.
Dodge, N. T., 217 West Ave., Ithaca, N.Y.
Dorfman, R., 2324 Virginia St., Berkeley 9, Calif.
Durand, J. D., Bureau of the Census, Washington, D.C.
Dutka, Mrs. A. B., 40 West 45th St., New York 19, N. Y.
Dymond, W. R., R.D. 2, Forest Home, Ithaca, N.Y.
Eastwood, R. T., Extension Divison, University of Alabama, University, Ala.
Eldridge, D. H., 10417 S. Morgan St., Chicago 43, Ill.
Ewing, A., 38 Southway, London, N.W., 11, England
Farwell, L. C., 738 Happ Road, Northfield, P.O. Northbrook, Ill.
Feigon, G. J., 4341 N. Troy St., Chicago 18, Ill.
Fuchs, R. F., School of Law, Indiana University, Bloomington, Ind.
Fullbrook, E. S., University of Nebraska, Lincoln, Neb.
Gaines, D. I., 521 West 111th St., New York 25, N.Y.
Garrod, R. M., 308 Italia St., Covina, Calif.
Gill, J., P. O. Box 243, Arlington, N.J.
Gillinghan, J. B., Department of Economics, Wayne University, Detroit 1, Mich.
Glantz, H. H., 4321 Halley Terrace, S.E., Washington 20, D.C.
Goldberg, S. P., 18 Clinton St., Brooklyn 2, N.Y.
Graner, F. M., 2237 Commonwealth, Madison, Wis.
Green, Miss E. H., Denison University, Granville, Ohio
Gruner, R. W., 239 Crest Road, Glen Ellyn, Ill.
Guthrie, P. N., Dept. of Economics and Commerce, Chapel Hill, N.C.
Hancock, T., College of Business Administration, University of Arkansas, Fayetteville, Ark.
Hartwell, J. M., Mutual Life Ins. Co. of New York, 34 Nasasu St., New York 5, N.Y.
Heilbrun, J., 70 Sumner St., Newton Centre 59, Mass.
de Hermida, F. A., 7535 Boulevard East, North Bergen, N.J.
Heron, J. R., Royal Bank of Canada, Head Office, Montreal, Quebec, Canada
Hirschman, A. O., 4650 Fifth St., S., Arlington, Va.
Hirschleifer, J., 789 St. Marks Ave., Brooklyn, N.Y.
Hobbs, R. P., Rinehart and Co., 232 Madison Ave., New York 16, N.Y.
Hodges, J. E., Department of Economics, Rice Institute, Houston, Texas
Hoffman, C., 231-10 131 Ave., Rosedale 10, L.I., N.Y.
Jaworski, S. 112-50 78th Ave., Forest Hills, N.Y.
Johnson, R. H., School of Business Administration, University of Arkansas, Fayetteville, Ark.
Jones, D. L., Jr., 801 E. Broad, Room 2, Richmond 19, Va.
Kaufman, M., 243 W. Gorgas Lane, Philadelphia 19, Pa.
Kende, G., 1300 Ashland Ave., Evanston, Ill.
Kimball, Miss E., 408 E. State St., Jacksonville, Ill.
Klang, G. L., 2601 Farragut Rd., Brooklyn 10, N.Y.
Kleven, B. J., Division of the Social Sciences, Wheaton College, Wheaton, Ill.
Kraines, O., 1949-84th St., Brooklyn 14, N.Y.

Law, R. O., 678 Truman Boyd Manor, Long Beach 6, Calif.
Leslie, G., 2480–16th St., N.W., Washington, D.C.
Levy, C. H., 3010 Valentine Ave., New York 58, N.Y.
Lewis, E. H., Apt. K-33, Montgomery Court, Narbeth, Pa.
Lim, C. S., 2008 Sherman Ave., Evanston, Ill.
Loft, G., 304 Stratford St., Syracuse, N.Y.
Lounsbury, R. H., Department of Economics, Dartmouth College, Hanover, N.H.
Lubell, H., 58 Hammond St., Cambridge 38, Mass.
Lumpkin, R. P., 1215 E. Brookland Park Blvd., Richmond 22, Va.
Mace, A., Jr., 5539 S. Kenwood Ave., Chicago 37, Ill.
March, M. S., 4202 N. Henderson Road, Apt. 3, Arlington, Va.
Matchett, G. J., Department of Economics, Illinois Institute of Technology, Chicago 16, Ill.
Mayer, P. F., William Penn College, Oskaloosa, Iowa
McGowan, Miss D. L., American Bankers Assn., 12 East 36th St., New York 16, N.Y.
Mengelberg, Mrs. K., 119 Livingston Ave., New Brunswick, N.J.
Merwin, C. L., International Monetary Fund, 1818 H St., N.W., Washington 6, D.C.
Middendorf, H. S., 24 Federal St., Boston, Mass.
Miernyk, W. H., 1515–7th St., Boulder, Colo.
Milam, F. M., Department of Agriculture, Hq. USAMGIK, APO 235, San Francisco, Calif.
Mladek, J. V., 1818 H St., N.W., Washington 6, D.C.
Monik, J. V., Velvarska St. 77, Prague XIX, Czechoslovakia
Morgan, C. A., Lorrain Apts., Indianola, Iowa
Netzer, Miss D. M., 7846 Avalon Ave., Chicago 19, Ill.
O'Brien, M. E., 1304 Forest Ave., Evanston, Ill.
O'Connor, J. J., 254 Seaman Ave., New York 34, N.Y.
Okun, J. L., 245 Gallatin St., N.W., Washington 11, D.C.
Osborn, R. C., College of Business Administration, University of Oklahoma, Norman, Okla.
Pace, L., St. Meggie, Simpson St., Marsa, Malta
Paglin, M., 2851 Buena Vista Way, Berkeley 8, Calif.
Paradise, F. M., 1105 Massachusetts Ave., Cambridge 38, Mass.
Pazos, F., 1818 H St., N.W., Washington 6, D.C.
Pendell, E., 210 E. Center St., Berea, Ohio
Petras, G. S., 24–35 28th St., Long Island City 2, N.Y.
Phillips, J. D., Wesleyan University, Middletown, Conn.
Pinches, H. E., Harry Ferguson, Inc., 15020 Woodward Ave., Detroit 3, Mich.
Polak, J. J., 1754 Kenyon St., N.W., Washington 10, D.C.
Politte, R. H., 470 N St., S.W., Washington 4, D.C.
Pungtragul, C., 606 N. Frances St., Madison 6, Wis.
Ransmeier, J. S., Department of Economics, Dartmouth College, Hanover, N.H.
Reid, E., 230 Park Ave., New York, N.Y.
Reisman, G. F., Room 403, Sheffield Hall, Department of Economics, Yale University, New Haven, Conn.
Ring, A. A., 538 First Ave., Pelham 65, N.Y.
Roadcap, R. R., 208 S. La Salle St., Room 680, Chicago 4, Ill.
Ruchlis, H., 2295 E. 22nd St., Brooklyn 29, N.Y.
Schneider, R. W., 1615 H St., N.W., Washington 6, D.C.
Schneider, W. M., Box 1063, College Place, Wash.
Seay, E. W., Knox College, Galesburg, Ill.
Seltzer, O., 1615 Franklin St., N.E., Apt. 202, Washington 18, D.C.
Shapiro, H. A., 3115 W. Ashby Place, Trinity University, San Antonio 1, Texas
Shields, M. W., 147 Florida St., Gainesville, Fla.
Simpson, J. W., 915 N. Salisbury St., West Lafayette, Ind.
Simpson, W. B., 1149 E. 56th St., Chicago 37, Ill.
Sisley, C. D., 201 W. Fourth St., Cincinnati, Ohio
Skinner, A. L., Office of Small Business, Department of Commerce, Washington, D.C.
Stark, H. W., P.O. Box 6481, Cleveland 1, Ohio
Stern, E. H., 95 Gresham St., London E.C. 2, England

Stonesifer, G. R., 172 Clinton St., Brooklyn 2, N.Y.
Strahl, R. M., 2502 N. 63rd St., Lincoln, Neb.
Sweezy, A. R., 4 Chapin Ct., Williamstown, Mass.
Taylor, O. H., B-22 Adams House, Cambridge, Mass.
Theobald, A. D., 111 N. Jefferson Ave., Peoria 2, Ill.
Thornton, R. H., Ginn and Co., Statler Bldg., Boston, Mass.
Titus, W. S., Taylor Instrument Co., P.O. Box 110, Rochester 1, N.Y.
Tuchman, J. M., The Clark House, 52 Clark St., Brooklyn 2, N.Y.
Tyler, E. J., Jr., Harper and Bros., 49 E. 33rd St., New York 16, N.Y.
Tzetzo, Miss F., 34 Bidwell Pkwy., Buffalo 13, N.Y.
Vandenhaag, E., 58 Morton St., New York 14, N.Y.
Van Metre, R. M., College of Business and Public Administration, College Park, Md.
Wallis, H. B., 23135 Sheridan, Dearborn, Mich.
Warning, D. S., 2115 Lincolnwood Drive, Evanston, Ill.
Watkins, C. D., 18 French St., Berea, Ohio
Wattel, H. L., 189–14 Mangin Ave., St. Albans 12, N.Y.
Wattenberg, W. W., College of Education, Wayne University, Detroit 1, Mich.
Weiskopf, W. J., 3467 Eastchester Road, New York 67, N.Y.
Wexler, Miss H. J., 4817 N. Capitol St., Washington 11, D.C.
Williams, C. R., Pinehurst Lane, Moorestown, N.J.
Young, J. P., 7213 Flower Ave., Apt. 4, Takoma Park, Md.
Zorn, E. C., Jr., American Bankers Assn., 12 E. 36th St., New York 16, N.Y.

The Sixth International Conference of Labour Statisticians will meet in Montreal on August 4, 1947. The agenda of the conference includes Employment and Payroll Statistics, Unemployment Statistics, Cost of Living Statistics and Statistics of Industrial Accidents. The task of the conference like that of its predecessors will be to formulate international standards to serve as a basis for improving the quality and international comparability of the statistics compiled in different countries. Invitations to be represented at the conference will be sent to the governments of all States Members of the International Labour Organisation and to the United Nations and other inter-governmental agencies concerned with the international standardisation of statistics.

Professor Seymour E. Harris, Harvard University, is compiling a complete bibliography of Lord Keynes's writings. He would appreciate very much any suggestions as to contributions by Lord Keynes to periodicals (other than his well-known contributions to the *Economic Journal*, the *Nation*, and the *New Republic*), to newspapers, weeklies, Festschriften, etc., in Great Britain and elsewhere.

Irvin Bendiner died November 4, 1946.

Edwin F. Dummeier, professor of economics at the State College of Washington, died on June 17, 1946, in Salt Lake City. Dr. Dummeier was the author of numerous monographs in the fields of agricultural economics and agricultural marketing and co-author with Richard B. Heflebower of *Economics with Applications to Agriculture*.

William H. Glasson, formerly chairman of the department of economics and dean of the Graduate School at Duke University, died November 11, 1946.

T. Bertrand Graham, of the Metropolitan Life Insurance Company, in New York, died in July, 1946.

James E. Hagerty, founder and former dean of the College of Commerce and Administration of Ohio State University, died on November 10, 1946.

Gustav A. Kleene, professor of economics, emeritus, at Trinity College, passed away at his summer home in Maine in August, 1946.

James Gerald Smith, a senior member of the department of economics at Princeton University, died November 28, 1946.

Appointments and Resignations

Byron R. Abernethy has been appointed associate professor of economics at Western Reserve University.

Don F. Adams has been appointed instructor in accounting, College of Business Administration, University of Georgia.

D. C. Anderson is serving as part-time assistant in the department of economics, University of Illinois.

Robert S. Aries is acting as consultant to Baugh and Sons Co., manufacturers of fertilizers and chemicals.

Elizabeth F. Baker is on leave of absence from Barnard College during the spring semester.

Willis N. Baer is now head of the department of economics and business administration, Moravian College for Men, Bethlehem, Pennsylvania.

Wilmer Baer has been appointed instructor in accounting at the State College of Washington.

Harold A. Baker has been appointed professor of marketing at the School of Business, Economics, and Government of John Carroll University.

Paul A. Baran, who served with the Office of Strategic Services and with the United States Strategic Bombing Survey in Europe and the Pacific, has joined the staff of the Foreign Research Division of the Federal Reserve Bank of New York.

Marvin J. Barloon has been appointed professor of economics at Western Reserve University.

G. A. Barrett has been appointed acting associate professor of business law at the University of North Carolina.

Eugene R. Beem has been appointed instructor in economics at the University of Pennsylvania.

Henry P. Bennet has been promoted to assistant professor of economics at Washington and Jefferson College.

Oscard D. Beverly, formerly with Arizona State Teachers College, has been appointed assistant professor of accounting, College of Business Administration, University of Georgia.

Mary Evelyn Blagg has accepted a position at the University of Mississippi Bureau of Public Administration.

J. Russell Boner, formerly with the Office of Price Administration, is now serving as price specialist with the Economic and Scientific Section of SCAP in Tokyo.

Raymond T. Bowman has returned to his position as associate professor of economics at the University of Pennsylvania after serving as assistant administrator in the Surplus Property Administration.

Stanley H. Brewer has been appointed instructor in transportation for the current academic year at the University of Washington.

Howard A. Bridgman is now assistant professor of economics at Tufts College.

Henry T. Buechel has resumed his position as assistant professor of economics at the University of Washington.

Robert D. Calkins has resigned his position as dean of the School of Business of Columbia University to become vice-president and director of the General Education Board.

Allan M. Cartter, Jr. has been appointed instructor in economics at Colgate University after service overseas with the U. S. Army.

Ralph Chances has been appointed instructor in economics at Trinity College.

Henry C. Chen, research associate at the Econometric Institute, is concurrently teaching at the College of the City of New York as instructor in economics.

C. F. Chizek, associate professor of accounting, School of Business, University of Chicago, is now secretary-treasurer of the American Accounting Association.

Walter A. Chudson has been appointed to the staff of the Department of Economic Affairs of the United Nations.

C. L. Cochran has been appointed instructor in economics at the University of North Carolina.

Thomas C. Cochran, of New York University, has been awarded a grant by the Committee on Research in Economic History to aid him in a study of entrepreneurial thought in the period 1840–1890 with special reference to leaders in the railroad industry.

J. L. Codding is an assistant in accounting in the School of Business Administration at Emory University.

Raymond W. Coleman has resigned from the department of management engineering at the Carnegie Institute of Technology to take a position with the Department of Commerce.

Gerhard Colm has transferred from the Fiscal Division of the Bureau of the Budget to the staff of the Council of Economic Advisers.

Wilfrid H. Crook, formerly with the National Wage Stabilization Board, has been appointed professor of economics at Colgate University.

Randle E. Dahl is now labor economist, Industrial Relations Division, Ford Motor Company, Dearborn.

Ernest Dale has been appointed lecturer in labor relations at the School of Business, Columbia University, and associate fellow of Jonathan Edwards College, Yale University.

Paul T. David has resigned as assistant chief, Fiscal Division, Bureau of the Budget, to enter the Department of State as representative on the Air Transport Committee of the Provisional International Civil Aviation Organization at Montreal.

James H. Davis will assume duties as instructor in business organization at Ohio State University on April 1, 1947.

John E. Dean, recently separated from the Coast Guard, has been appointed assistant professor of accounting, College of Business Administration, University of Georgia.

O. K. Dizmang, formerly price economist in the Spokane district of the Office of Price Administration, is now regional economist, War Assets Administration, Spokane.

Herbert E. Dougall has been appointed professor of finance in the Graduate School of Business, Stanford University.

O. E. Draper, on leave in 1945–46 to teach in the American University in Shrivenham and Biarritz and to lecture in Frankfort, has resumed his teaching of accounting, College of Economics and Business, University of Washington.

Lawrence S. Dreiman is serving as chief of the budget section and acting chief of the public finance branch of the Finance Division, U.S Element, Allied Commission for Austria, in Vienna.

E. O. Edwards is an assistant in economics at Washington and Jefferson College.

Otto H. Ehrlich has been appointed assistant professor of economics at the School of Business and Civic Administration of the College of the City of New York.

Walter L. Eisenberg has been serving as lecturer in economics at Brooklyn College since September, 1945.

Oscar L. Endler has transferred from the War Assets Administration to the Bureau of Reclamation, where he is chief of the national and regional economics section.

N. H. Engle, of the University of Washington, is serving on the Small Business Committee of the Department of Commerce.

Wilson L. Farman, assistant professor of economics at Colgate University, is now on leave of absence to complete his graduate work at the University of Michigan.

Frank A. Farnsworth, Jr., has been promoted to assistant professor of economics at Colgate University.

Raymond F. Farwell, Captain in the United States Navy and professor of transportation at the University of Washington, has been granted an extension of leave to serve as an American representative to the conference on revision of the international rules of the nautical road.

Leon S. Felde, formerly of the Belgian government offices in New York, has accepted a position with the United Nations, Economic Department, Transport and Communications Division, as senior executive in charge of the research and documentation services.

Charles D. Forrest has been appointed assistant professor of marketing in charge of courses in advertising in the College of Economics and Business at the University of Washington.

Delbert R. French is now economist in the Economics and Resources Division of the Bureau of Reclamation in Washington.

John B. Flynn is instructor in economics at the University of Pennsylvania.

John D. Gaffey has been appointed regional economist in the Los Angeles regional office of the Department of Commerce.

Howard G. Gamser has joined the staff of the National Labor Relations Board, First Regional Office, in Boston.

John M. Gersting has been appointed professor of economics at the School of Business, Economics and Government of John Carroll University.

Frank Goodwin, formerly of Washington College, has been appointed associate professor of economics at the University of Florida.

Roman S. Gorski is assistant professor of finance and business administration at the Associated Colleges of Upper New York, Sampson, New York.

Amor Gosfield is instructor in economics at the University of Pennsylvania.

Frank H. Hamack has returned from teaching in the American University in Shrivenham and Biarritz and lecturing in Frankfort to take up duties as teacher of secretarial courses at the University of Washington.

Russell A. Headley is an instructor in the department of economics of the University of Pennsylvania.

Arleigh P. Hess, Jr., is instructor in economics at the University of Pennsylvania.

William T. Hicks, formerly with the United States Department of Agriculture, has been appointed professor of marketing and director of the Bureau of Business Research, College of Business Administration, University of Georgia.

Dan A. Hill has been appointed lecturer in business administration at the School of Business, Economics, and Government of John Carroll University.

A. M. Hillhouse has resumed his position as associate professor of public finance at the University of Cincinnati after serving as budget director of the National Housing Agency and as public finance specialist with Military Government in England, France and Austria.

J. Weldon Hoot, associate professor of economics, University of Pennsylvania, has been appointed director of the graduate division of the Wharton School of Finance and Commerce, University of Pennsylvania.

William S. Hopkins, formerly of Stanford University, has been appointed professor of labor economics and director of the Institute of Industrial Relations, University of Washington.

John Ise, of the University of Kansas, will teach in the 1947 summer session of the University of New Mexico.

Neil H. Jacoby, professor of finance, School of Business, University of Chicago, has been elected secretary-treasurer of the American Finance Association.

W. E. Jennings has been appointed associate professor and head of the department of secretarial studies, College of Business Administration, University of Georgia.

Vernon H. Jensen has joined the staff of the New York State School of Industrial and Labor Relations, Cornell University.

Robert E. Johnson has resigned as director of the Civilian Production Administration's Office of Economic Review and Analysis and has returned to his position as economist with the American Telephone and Telegraph Company.

R. C. Journey, formerly with the Office of Price Administration, has been appointed assistant professor of economics at Washington and Jefferson College.

Everett M. Kassalow has resigned his position as research associate in the Research and Education Department of the Congress of Industrial Organizations, to take a position as director of research for the United Rubber Workers, in Akron, Ohio.

William F. Kennedy has been appointed assistant professor of economics at the University of California, Santa Barbara College.

Marshall D. Ketchum, associate professor of finance, School of Business, University of Chicago, has been appointed editor of the *Journal of Finance*.

William C. Kessler has been promoted to associate professor of economics at Colgate University.

Paul L. Kleinsorge, formerly chairman of the Tenth Regional Wage Stabilization Board, has been appointed acting associate professor of economics at Stanford University.

Maurice W. Lee, formerly executive assistant to the administrator of the Office of Price Administration, has been appointed dean of the School of Business Administration and head of the department of economics at the State College of Washington.

William S. Lennon is instructor in economics at Washington and Jefferson College.

Sar Levitan has left the research staff of the Veterans Administration to accept a position as resident head of the economics department at Sampson College.

W. Bruce Lockling has been granted an extension of leave by the University of Washington to continue his work as staff assistant in the European Theater on the overall problems of refugees and displaced persons.

David Lusher, who was earlier reported as having accepted an appointment at Stanford University, has resigned this appointment to remain with the Federal Housing Administration.

James W. Martin, director of the University of Kentucky Bureau of Business, is part-time research director for the Virginia Interim Public Service Tax Study Committee.

Edward S. Mason, of the Graduate School of Arts and Sciences of Harvard University, has been awarded the Medal of Freedom by the War Department for his services during the war.

Leonard G. Mathy has been promoted from instructor to assisant professor in the College of Economics and Business, University of Washington.

Lawrence P. McGrath, formerly of Catholic University, has been appointed associate professor of finance, College of Business Administration, University of Georgia.

John A. McGuire, formerly with the Office of Price Administration, has been appointed acting assistant professor of economics and business administration at the College of William and Mary.

Glenn E. McLaughlin is chief of the Economics and Resources Division of the Bureau of Reclamation in Washington.

William H. McPherson, formerly of Oberlin College, has accepted a professorship in the Institute of Labor and Industrial Relations at the University of Illinois.

Jorge Mendez is teaching at the National University of Columbia in Bogotá.

Jaroslav V. Monik, who is lecturer in economics at the University of Prague during the current year, is to organize a new office of international economics while there.

H. W. Moorhouse, formerly with the Department of Agriculture, has been appointed visiting professor of economics and assistant director of the Bureau of Business Research, College of Business Administration, University of Georgia.

Robert M. Musselman is serving as lecturer in accounting at the University of Virginia.

Dorothy M. Netzer has been appointed instructor in economics in the commerce department of Loyola University, Chicago.

John H. Nixon has resigned as chief economist of the lumber branch of the Office of Price Administration to enter the Graduate School of Harvard University.

Michael O'Connor, recently separated from the Navy with the rank of Lieutenant Commander, has been appointed associate professor of economics in the College of Business Administration, University of Georgia.

John Pagani, of Santa Clara University, is serving as lecturer in economics at Stanford University during the current year.

Beulah L. Pardue has accepted a position with the Virginia Public Service Tax Study Committee, an interim agency of the state General Assembly.

R. F. Patterson, professor of government at the University of South Dakota, has succeeded E. S. Sparks as dean of the School of Business at that institution.

Elmer Pendell has joined the faculty of the School of Commerce of Baldwin-Wallace College.

Clyde W. Phelps, of the University of Southern California, has been elected editor-in-chief of the *Journal of Marketing*.

Howard S. Piquet, formerly with the U. S. Tariff Commission and the Office of War Mobilization and Reconversion, is now with the Legislative Reference Service of the Library of Congress as special adviser on international economic relations, a post provided for by the recently enacted LaFollette-Monroney Congressional Reorganization Act.

A. Neal Potter is instructor in economics at Carnegie Institute of Technology.

Porter Raley has accepted a position on the research staff of the University of Kentucky Bureau of Business Research.

Henry Reining has returned to the faculty of the School of Public Administration of the University of Southern California.

Roy S. Roberts, who has been with the Bureau of Agricultural Economics of the Department of Agriculture several years, has taken a position with the Social Security Administration.

Frank J. Robinson, formerly statistics supervisor of the Sperry Corporation, has been appointed assistant professor of management in the College of Economics and Business, University of Washington.

John S. Rosebery has been appointed instructor in economics at the University of Pennsylvania.

Armand P. Ruderman, formerly research associate with the Harvard Committee on Research in the Social Sciences, has been appointed instructor in economics at Colgate University.

Frederick N. Sass is instructor in economics at the University of Pennsylvania.

Anthony L. Saucetta has been appointed instructor of economics at Western Reserve University.

Raymond J. Saulnier will be on leave of absence from Barnard College during the academic year 1947–48.

Robert E. Schoenberg, formerly Lieutenant, Army Air Forces, has been appointed instructor in economics at Colgate University.

Gregor Sebba has been appointed associate professor of economics in the College of Business Administration, University of Georgia.

Joel Seidman has resigned as assistant director of the Field Division, National Labor Relations Board, to join the staff of the University of Chicago as assistant professor of the social sciences.

Samuel A. Silver has been appointed assistant professor of economics, College of Business Administration, University of Georgia.

Floyd R. Simpson has been promoted from assistant professor to associate professor of ecnomics at the University of Washington.

Howard R. Smith, formerly with the Office of Defense Transportation and the Bureau of the Budget, has been appointed associate professor of economics, College of Business Administration, University of Georgia.

Joseph J. Spengler, professor of economics and director of graduate studies at Duke University, has been elected president of the Southern Economic Association for the current year.

H. F. Stettler has been appointed instructor in the department of economics, University of Illinois.

Norman R. Stocker has been appointed instructor in economics at Marygrove College.

James H. Street is instructor in economics at the University of Pennsylvania.

Edward D. W. Spingarn has resigned as assistant professor of economics at Trinity College to accept a position with the International Monetary Fund.

Richard K. Stuart has been appointed instructor in economics at the University of Pennsylvania.

George J. Stigler, professor of economics at Brown University, taught a graduate course in economics at Columbia University during the first semester of the current academic year.

M. L. Stokes has been appointed associate professor of economics at Pennsylvania State College.

Theodore A. Sumberg has resigned as an economist of the Federal Reserve Bank of New York to continue his studies at the New School of Social Research. He has been awarded a fellowship by the Social Science Research Council.

Leland E. Traywick has been appointed assistant professor of economics at Western Reserve University.

Kenneth L. Trefftzs, associate professor of finance in the College of Commerce of the University of Southern California, has been appointed head of the department of finance.

Ralph D. Turlington has been appointed instructor in marketing and statistics at the University of Florida.

John G. Turnbull is a member of the staff of the department of economics at Massachusetts Institute of Technology instead of Tufts College, as was reported previously.

Rutledge Vining has been appointed to a professorship in the department of economics at the University of Virginia.

John Weed is an instructor in the department of accounting, of Ohio State University.

Laurence H. Walker has been appointed assistant professor of economics, College of Business Administration, University of Georgia.

Geneva R. Watkins has been appointed instructor in secretarial studies, College of Business Administration, University of Georgia.

Sidney Wertimer is instructor in economics at the University of Pennsylvania.

William O. Weyforth, who was granted leave of absence to serve with the War Manpower Commission in Maryland as assistant director, has resumed his duties at the Johns Hopkins University.

Lawrence Witt, formerly agricultural economist with the Office of Foreign Agricultural Relations of the Department of Agriculture, has been appointed associate professor of agricultural economics at Michigan State College.

Donald H. Wollett, formerly at the University of Indiana, is now assistant professor of business law at the University of Washington.

Ralph A. Young has resigned a professorship of economics at the University of Pennsylvania to become assistant director of research, Federal Reserve System, Washington, D.C.

C. Ralph Youngblood has been appointed assistant professor of economics, College of Business Administration, University of Georgia.

Dean A. Worcester, formerly of the University of Georgia, is now assistant professor of economics at the University of Wahington.

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